# CSEA SYSTEMS AND A MOVE TOWARD A MODERN FUTURE

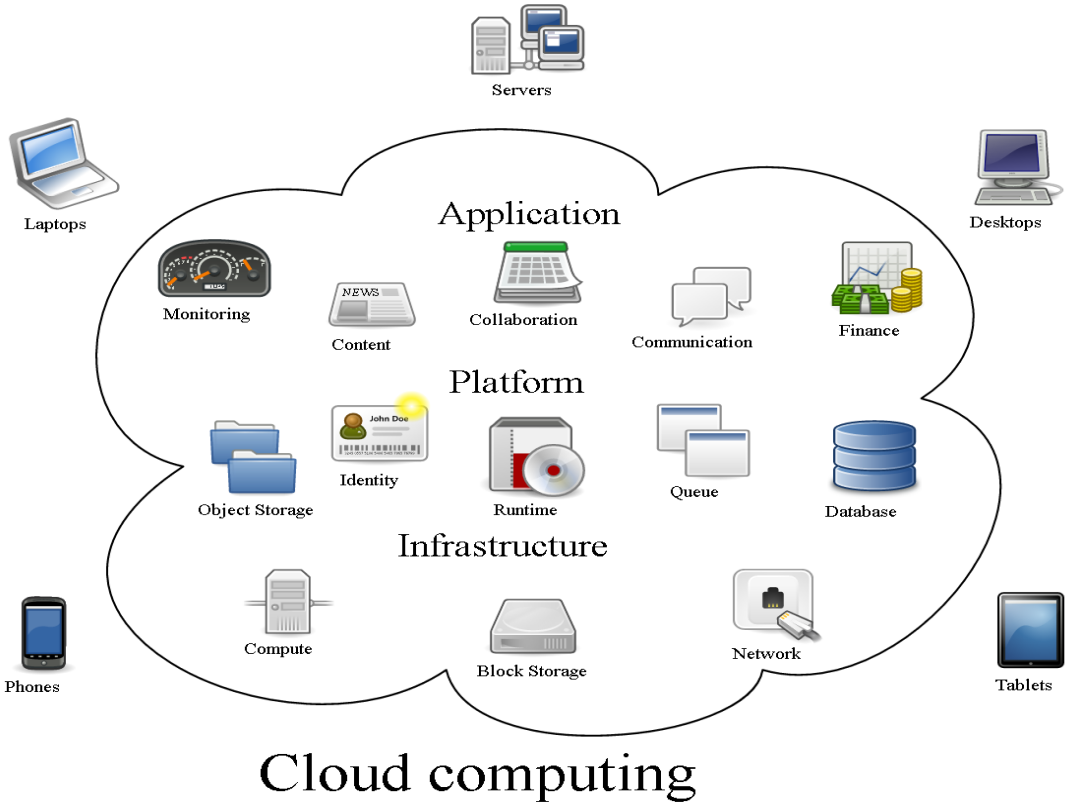
Looking ahead towards modernization in Maryland Child Support

# Modernization – What's New?

Many questions arise concerning new technologies that effect our lives daily. We hear terms such as "Cloud" this and "Cloud" that. What is "Cloud" and why is it that every where you turn you are hearing about the "Cloud"?

# Modernization – The "Cloud"

The concept of what is now referred to as "Cloud" computing is not a new concept but it is a new term. The term seems to have grown from how the concept looks when translated to a diagram.



# Modernization – The "Cloud"

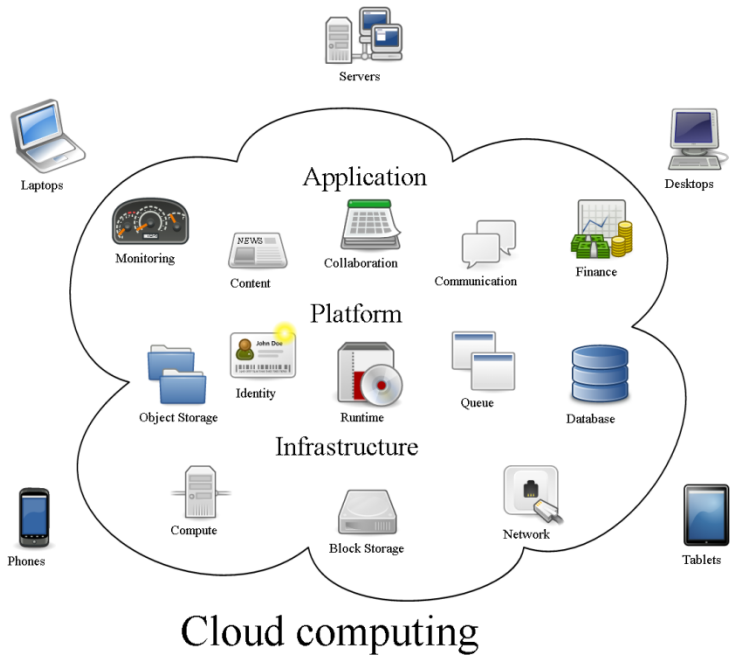
As you could see in the previous diagram the "Cloud" is a mass of shared resources that can exist in different locations and can be used by different people with different usage goals located in different locations. This concept of shared resources has been in existence for quite a while:

- In the 70's it was called "Time Sharing" – users submitted "Job" to be run on a mainframe computer that was shared by other users or organizations.
- The late 80's brought the concept of "Distributed Databases", data was stored in multiple locations and used computing resources that were not maintained at a single set location.

# Modernization – The "Cloud"

- The 90's brought about "VPN" or Virtual Private Networks where you could "virtually" be on a private Local Area Network but actually be anywhere in the world.
- Also in the 90's the "World Wide Web" started gaining traction, bring information and resources previously unavailable, now available to every office or home desktop.
- Around 2006 Amazon is created with introducing the term "Cloud" with it's new concept product offering the "Elastic Computing Cloud".

# Modernization - Data




One thing you may have noticed from the earlier cloud diagram is that there is data coming from a whole lot of sources. You have databases, financial data, video data, audio data, news and entertainment content and its coming from vast numbers of sources going to vast numbers of destinations.

# Modernization – Data "Big"

With all of these data sources and data types and the new ability to house, analyze and distribute for use of the data, a new term and concept has emerged, "Big Data". What is "Big Data"? "Big Data" is a relatively new term that has been around for a few years but what it involves is base on five hallmarks:

- **Volume** – "Big Data" deal with huge amounts of information
- **Velocity** – "Big Data" accounts for the speed at which new data is acquired and associated.
- **Variety** – "Big Data" deals with all sorts data whether files, photographs, video, charts or numbers.
- **Variability** – "Big Data" recognizes that there is a lot of inconsistency in data and tries to mitigate.
- **Veracity** – "Big Data" tries to account for the quality or lack of it of captured data.

# Modernization – The "Idea"

Currently approximately 25% of large American and European companies use Cloud platforms from Amazon, Microsoft, Google and IBM. This comprises what is currently a $20 billion dollar market expected to be by 2020 a $64 billion dollar market. Maryland at present has a contract with Amazon to provide for our proposed Cloud computing, so the "Cloud Idea" is catching on. The idea of Cloud computing is to become less infrastructure based, have better and more diverse, accurate data and benefit from the economy and better accuracy of "shared" data resources. In the new environment we should have less duplication of common data while maintaining a high degree of data integrity and a lower dependency on having to buy, maintain and upgrade hardware. It is expected that workers in the field would have secure access to data, records, analysis and general computing anywhere they happen to be. Also, in turn, the public would have increase access to us and the services that we provide to them.

# Modernization – What is "Modern"?

Back at the beginning of the 2000s a term and product came into use call "Thin Client". The user could now see and use a user interface for the system application that they are using but none of the actual computing power resides on there computing device or even in a single location on a mainframe or server but draws that computing power from multiple sources grabbing and processing data from multiple sources. Think of apps like Microsoft Office 360 or applications used on a Chrome Book or many Smartphone apps. The actual applications are not on your device, you are accessing that game or application that is running at some remote location and you are using a session to do what you want to do.

# Modernization – How To Do It?

Pennsylvania, a state that has consistently been a leader in all Child Support metrics uses a multiple interfaces with both government and private entities. It's system which isn't the newest in the nation is used in one of the most efficient manner. Modern system architecture is more modular that older legacy systems that for the most part were conceived in the late 1980's with the majority written in old COBOL code that has been consistently added on to over the past decades. As with our system, there is constant duplication of data in many system around the country. The newest and most effective systems (such as Penn) are ones that most effectively use the data they collect. I would argue that the system is just the vehicle for the collection, accessing and using of Child Support Enforcement effecting data.

# Modernization – How To Do It?

A term that came into use at the turn of the century was "Business Intelligence" which was coined by manufactures of software that could take data and manipulate it in various ways that were not done before in order to supply multiple analytic views of data sets. In Pennsylvania's case, a feature of their system is PIM (Performance Improvement Module) which takes the customer data and provides:

- Payment Profiles
- Performance Metrics based on profiles
- Identification of cases that negatively affect collections
- Use of predictive analytics based on payer demographics for early intervention targeting strategies

# Modernization – How will it look?

At this point, I don't really know, but at as a Child Support IT professional I know what I would like to see:

- A flexible modular modern system
- A scalable platform
- Ability to leverage today's communication mediums
- Interfaces with government and business partners that are more transparent and "real time".
- Better, more integrated, flexible and more seamless utilization of data sources.
- Ability to customize the user interface to fit how users work on a local and personal level.

# Modernization – How will it look?

- Advanced, real-time, integrated data analytics tools that are available at every organizational level.
- Flexible and database integrated document management.
- Secure mobile system access.

❖ We have already started with myDHR, but I would like to eventually see a more interactive public user experience for our customers and a safe meshing of that customer interface with parts of our system to provide our customers with "real-time" account information. This would include CU, NCP and Employer interactions.