Cloud Computing and Security

Security and Privacy

- Companies live by security
- Privacy
  - Authentication
  - Authorization
- Ex: NOVA

Breakdown Of Cloud

- Client Computer and the application (what we see)
- Computers, servers, and data storage systems that make "cloud" (what we don't see)
- Central server administers system to run smoothly
- Middleware
- Virtualization
- Storage
- Redundancy

Cloud Computing Architecture

- Front end, back end, cloud based delivery, and a network.
- Front end (client) interacts with storage
- Storage (public, private, community)
- SaaS
- DaaS
- PaaS
- IaaS

SaaS

- Software as a Service
- Common delivery model for many business applications
- Potential to reduce IT costs by outsourcing hardware and software maintenance to the SaaS provider

PaaS

- Platform as a Service
- Allows for the developing, running, and managing web applications without the difficulty of building and maintaining the infrastructure associated with developing an application.
- Can be a cloud service where the user controls the software and the provider controls the IT side, or can be installed in the companies infrastructure as a service and managed by companies IT.

IaaS

- Infrastructure as a Service
- Offer computers, physical or virtual machines, and other resources
- Taking the physical hardware and going completely virtual
- Eliminates the need for data center, heating, cooling, and IT maintenance

How Cloud Works

- Local computers don't have to do all the heavy lifting
- Network of computers of the cloud handle running applications
- User computer needs to be able to run the interface software of the cloud computing system
- Ex: Yahoo! Mail, Hotmail, Gmail, etc. vs. Outlook

Conclusion

- Overall, cloud computing is the next big thing. Many free web applications we use already apply cloud computing. It greatly reduces the costs of infrastructure and IT for businesses. Cloud computing has various options as well meaning it is very flexible.

References

Cloud Computing and Security

Security and Privacy

- Companies live by security
- Privacy
  - Authentication
  - Authorization
- Ex: NSA's

Cloud Computing Architecture

- Front end, back end, cloud based delivery, and a network.
- Front end (client) interacts with storage
- Storage (public, private, community)
- SaaS
- DaaS
- PaaS
- IaaS

SaaS

- Software as a Service
- Common delivery model for many business applications
- Potential to reduce IT costs by outsourcing hardware and software maintenance to the SaaS provider

PaaS

- Platform as a Service
- Allows for the developing, running, and managing web applications without the difficulty of building and maintaining the infrastructure associated with developing an application.
- Can be a cloud service where the user controls the software and the provider controls the IT side, or can be installed in the companies infrastructure as a service and managed by companies IT.

- Infrastructure as a
- Offer computers,
and other resource
- Taking the physic
completely virtual
- Eliminates the ne
cooling, and IT m

Breakdown Of Cloud

- Client Computer and the application (what we see)
- Co-systems, servers, and data storage systems that make "cloud" (what we don't see)
- Central server administrators system to run smoothly
- Middleware
- Virtualization
- Storage
- Particulars

How Cloud Works

- Local computers don't have to do all the heavy lifting
- Network of computers of the cloud handle running applications
- User computer needs to be able to run the interface software of the cloud computing system
- Ex: Yahoo! Mail, Hotmail, Gmail, etc. vs. Outlook

Conclusion

- Overall, cloud computing is the next big thing. Many new web applications are use already apply cloud computing. It greatly reduces the costs of infrastructure and IT for businesses. Cloud computing has various options as well ensuring it is very flexible.

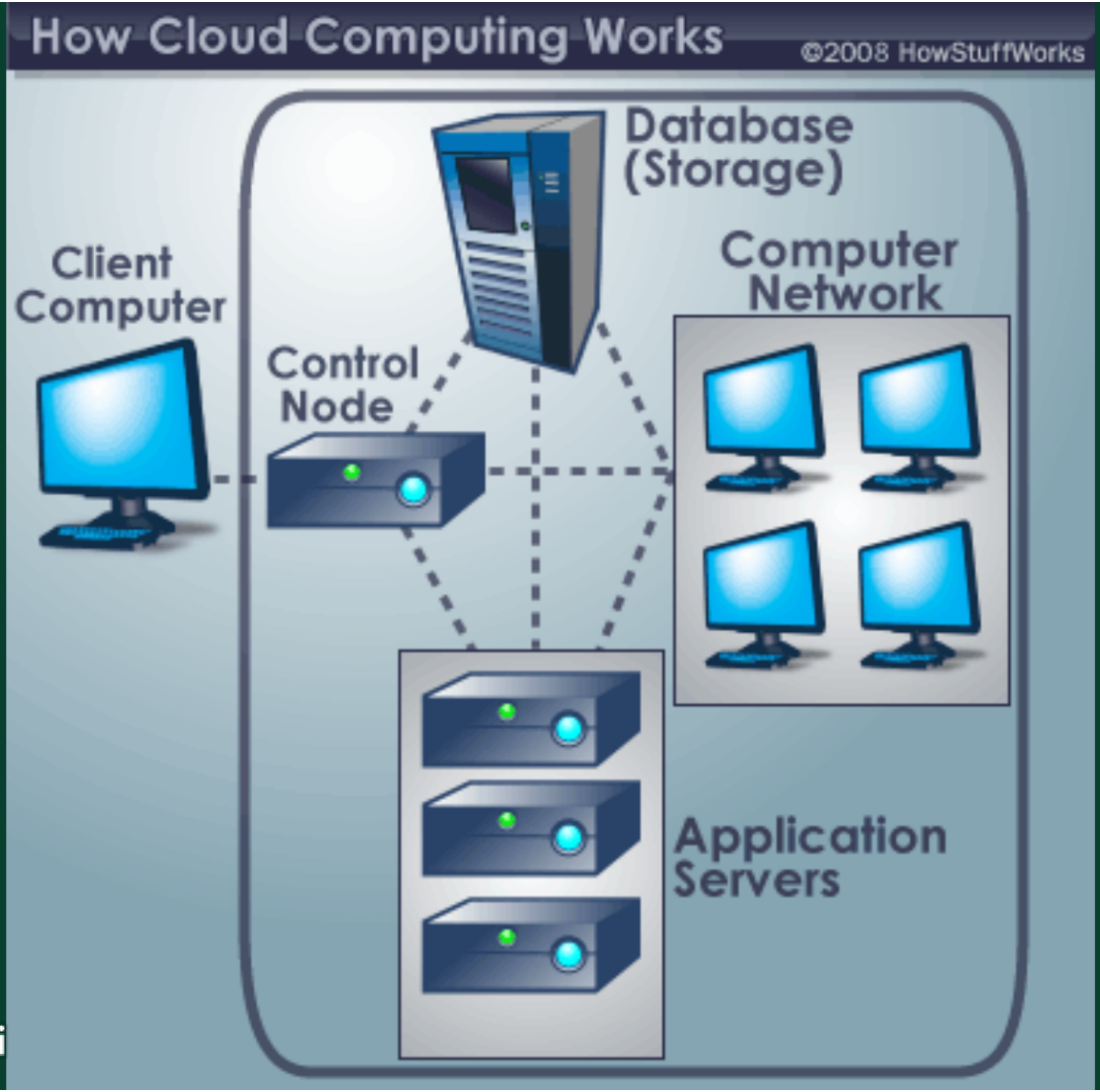
References

- http://computer.howstuffworks.com/cloud-computing/cloud-computing.htm
- http://www.nist.gov/itl/csd/cloud-102011.cfm
- http://www.ijcsi.org/papers/IJCSI-8-1-609-616.pdf
- http://www.ijcsi.org/papers/IJCSI-8-1-609-616.pdf
- http://www.ijcsi.org/papers/IJCSI-8-1-609-616.pdf
- http://www.ijcsi.org/papers/IJCSI-8-1-609-616.pdf

Prezi

How Cloud Works

- Local computers don't have to do all the heavy lifting
- Network of computers of the cloud handle running applications
- User computer needs to be able to run the interface software of the cloud computing system
- Ex: Yahoo! Mail, Hotmail, Gmail, etc. vs. Outlook

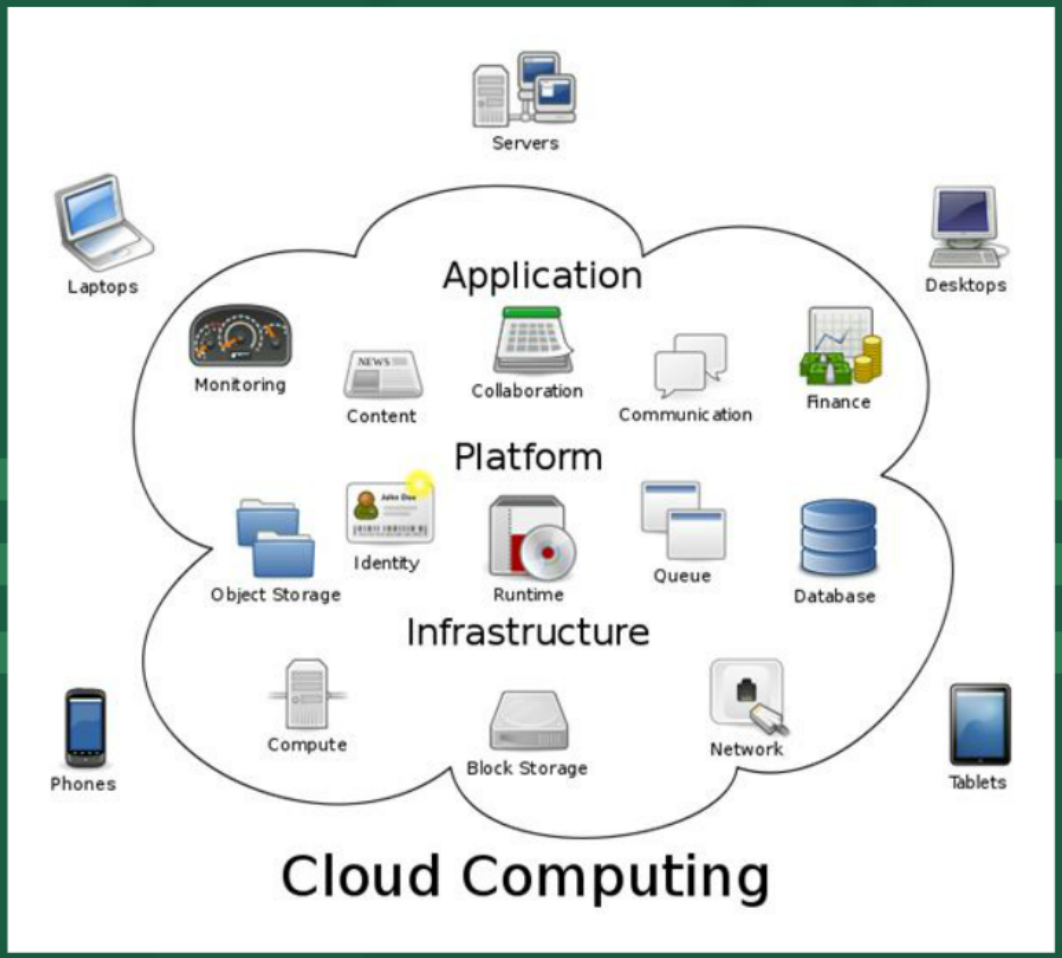

How Cloud Computing Works
©2008 HowStuffWorks
Database (Storage)
Client Computer
Control Node
Computer Network
Application Servers

Breakdown Of Cloud

- Client Computer and the application (what we see)
- Computers, servers, and data storage systems that make "cloud" (what we don't see)
- Central server administers system to run smoothly.
- Middleware
- Virtualization
- Storage
- Redundancy

Security and Privacy

- Companies live by security
- Privacy
  - Authentication
  - Authorization
- Ex: NOVA

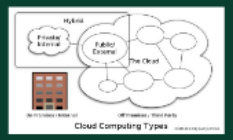

Servers
Laptops
Desktops
Application
Monitoring
Content
Collaboration
Communication
Finance
Platform
Identity
Object Storage
Runtime
Queue
Database
Infrastructure
Compute
Block Storage
Network
Phones
Tablets
Cloud Computing

Cloud Computing Architecture

- Front end, back end, cloud based delivery, and a network.
- Front end (client) interacts with storage
- Storage (public, private, community)
- SaaS
- DaaS
- PaaS
- IaaS

Types of Cloud

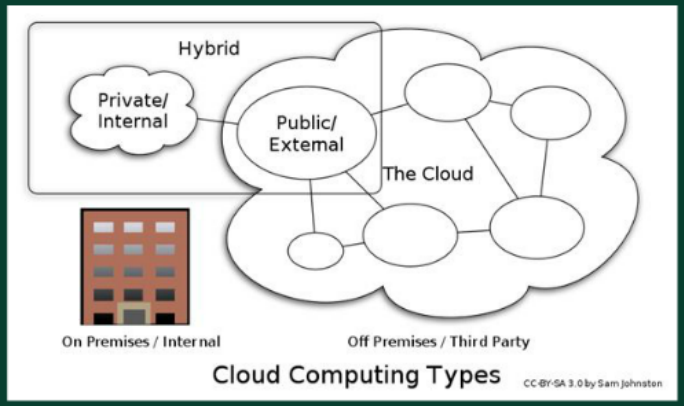
- Public - accessible by any user
- Private - clouds accessible only to a single organization or company
- Community - which are a subset group of users with similar interests
- Hybrid - combination of any of the three



ge

Types of Cloud

- Public - accessible by any user
- Private - clouds accessible only to a single organization or company
- Community - which are a subset group of users with similar interests
- Hybrid - combination of any of the three



SaaS

- Software as a Service
- Common delivery model for many business applications
- Potential to reduce IT costs by outsourcing hardware and software maintenance to the SaaS provider

PaaS

- Platform as a Service
- Allows for the developing, running, and managing web applications without the difficulty of building and maintaining the infrastructure associated with developing an application.
- Can be a cloud service where the user controls the software and the provider controls the IT side, or can be installed in the companies infrastructure as a service and managed by companies IT.

IaaS

- Infrastructure as a Service
- Offer computers, physical or virtual machines, and other resources
- Taking the physical hardware and going completely virtual
- Eliminates the need for data center, heating, cooling, and IT maintenance

Conclusion

- Overall, cloud computing is the next big thing. Many free web applications we use already apply cloud computing. It greatly reduces the costs of infrastructure and IT for businesses. Cloud computing has various options as well meaning it is very flexible.

References

- http://computer.howstuffworks.com/cloud-computing/cloud-computing.htm
- http://www.nist.gov/itl/cloud/upload/NIST_SP-500-291_Version-2_2013_June18_FINAL.pdf
- http://www.brighthub.com/environment/green-computing/articles/127086.aspx
- http://www.computerworld.com/article/2550226/data-center/the-real-costs-of-cloud-computing.html
- http://i.dell.com/sites/content/business/solutions/power/en/Documents/ps1q12-20120209-sherbak.pdf

Cloud Computing and Security

Security and Privacy

- Companies live by security
- Privacy
  - Authentication
  - Authorization
- Ex: NSA's

Cloud Computing Architecture

- Front end, back end, cloud based delivery, and a network.
- Front end (client) interacts with storage
- Storage (public, private, community)
- SaaS
- DaaS
- PaaS
- IaaS

SaaS

- Software as a Service
- Common delivery model for many business applications
- Potential to reduce IT costs by outsourcing hardware and software maintenance to the SaaS provider

PaaS

- Platform as a Service
- Allows for the developing, running, and managing web applications without the difficulty of building and maintaining the infrastructure associated with developing an application.
- Can be a cloud service where the user controls the software and the provider controls the IT side, or can be installed in the companies infrastructure as a service and managed by companies IT.

- Infrastructure as a
- Offer computers,
and other resource
- Taking the physic
completely virtual
- Eliminates the ne
cooling, and IT m

Breakdown Of Cloud

- Client Computer and the application (what we see)
- Co-systems, servers, and data storage systems that make "cloud" (what we don't see)
- Central server administrators system to run smoothly
- Middleware
- Virtualization
- Storage
- Particulars

How Cloud Works

- Local computers don't have to do all the heavy lifting
- Network of computers of the cloud handle running applications
- User computer needs to be able to run the interface software of the cloud computing system
- Ex: Yahoo! Mail, Hotmail, Gmail, etc. vs. Outlook

Conclusion

- Overall, cloud computing is the next big thing. Many new web applications are use already apply cloud computing. It greatly reduces the costs of infrastructure and IT for businesses. Cloud computing has various options as well meaning it is very flexible.

References

- http://computer.howstuffworks.com/cloud-computing/cloud-computing.htm
- http://www.nist.gov/itl/csd/cloud-102011.cfm
- http://www.ijcsi.org/papers/IJCSI-8-1-609-616.pdf
- http://www.ijcsi.org/papers/IJCSI-8-1-609-616.pdf
- http://www.ijcsi.org/papers/IJCSI-8-1-609-616.pdf
- http://www.ijcsi.org/papers/IJCSI-8-1-609-616.pdf

Prezi