Welcome to the CA Gen Conference

Hamburg, Germany
30 September 2010

we can

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agenda

- Mission, Vision, Strategy
- Where Are We Now?
- CA Gen 8.0 Overview
- Application Development Trends and CA Gen Future Direction
- Cloud Computing and CA Gen
- EDGE and CA Gen Community Worldwide
- Questions and Discussion

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CA Gen Mission and Vision

…

CA Gen mission

Enable you to deliver high quality enterprise applications that:

- Meet your critical business needs and provide ongoing strategic value
- Run on the platform and architecture of your choice
- Can be easily adapted to change (technology, business opportunity, legislation, etc.)

While at the same time enabling you to:

- Minimize total cost of application ownership (development and maintenance)
- Accelerate time to market
- Optimize developer productivity

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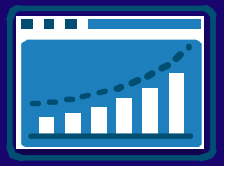
CA Gen vision

Provide ongoing enhancements to CA Gen that:

- **Support continually evolving technology and platform advancements**
- **Enable you to quickly modernize and extend your CA Gen applications to leverage new business opportunities**
- **Enable you to reduce application development, maintenance and operations costs**

Increase use of CA Gen within existing customers

Expand use of CA Gen into new businesses



- **Application modernization and re-platforming**

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strategies to deliver on CA Gen vision

- Modernize and enhance the Design Tools
  - CA Gen Studio
  - Simplifies and speeds rollout of new CA Gen features
  - Makes CA Gen easier to use
  - Increase openness of CA Gen to enable application integration
  - Optimizes use of internal CA Gen developer resources
- Reduce complexity and cost of migrating to new releases
  - Verify runtimes (in CA Gen 8.0)/provide test applications
  - Co-support VS 2008 and VS 2010
- Provide access to evolving technologies and 3rd party products that extend capability of CA Gen

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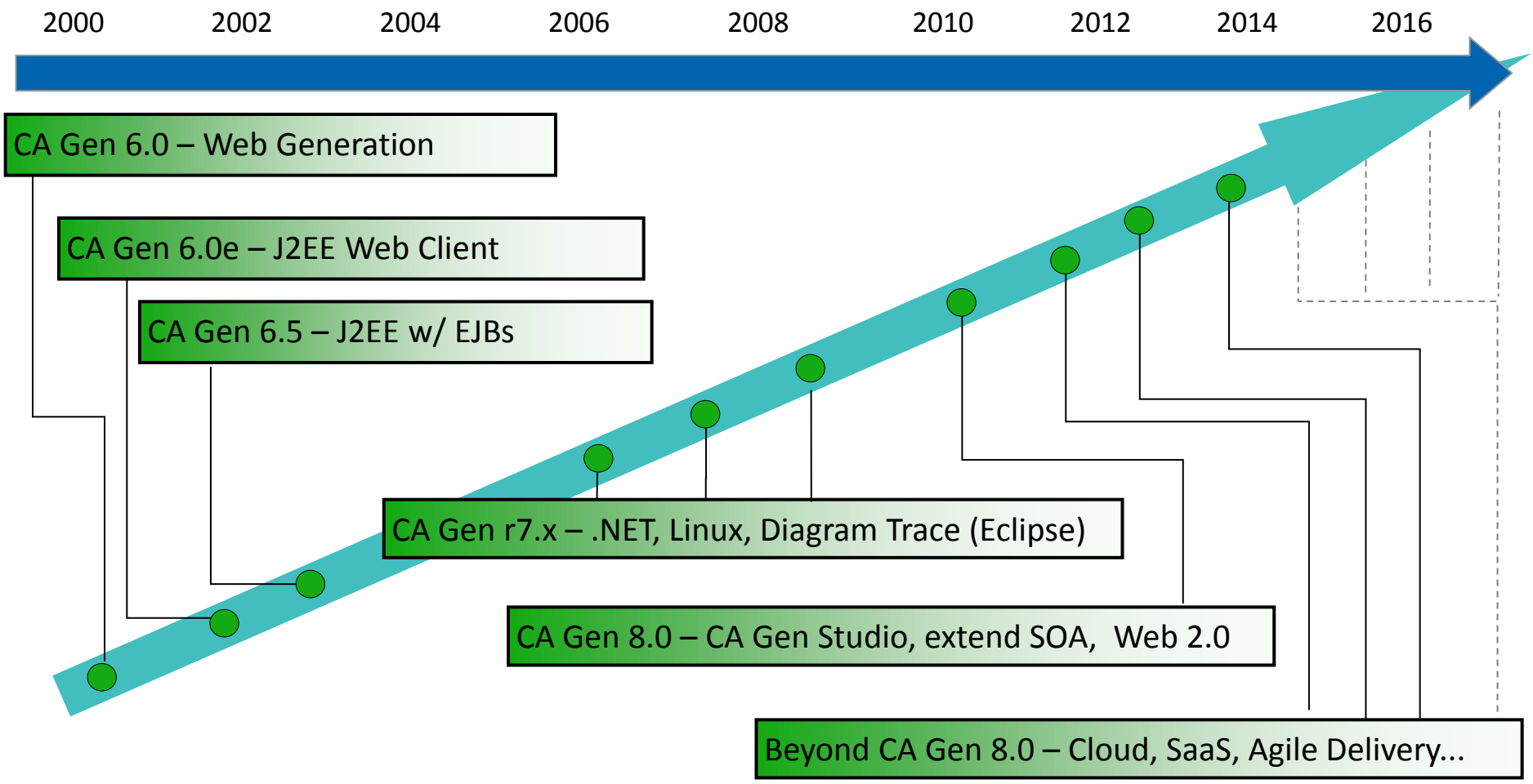
CA Gen – past, present, future



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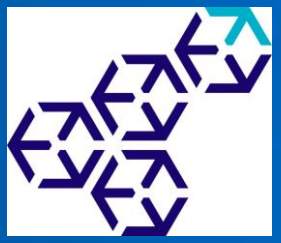
reasons customers choose CA Gen

Flexibility

- Platform independence
- Technology insulation

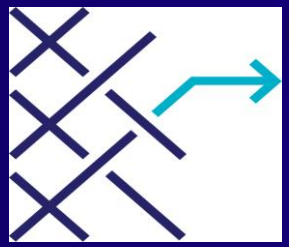


Performance

- Extremely stable systems
- Enterprise scalability

Significant ROI

- Speed time to market
- Increased productivity



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did you know when…

...an application built with CA Gen is strategically used

…someone travels by train in Switzerland
…goods and services are taxed in Canada
…a letter is mailed in the United Kingdom
…you are pulled over for speeding in the State of Missouri
…a packaged is express delivered to all parts of the world
…you use your frequent flier miles from many major airlines
…you use an ATM machine in many countries
...criminal records are accessed in the US
...child support payments are processed
…taxes are calculated and collected in some countries
…a check clears the U.S. Federal Reserve
…health claims are processed in California
…you are a prisoner in certain states
…you buy pension insurance in Sweden
…you view your phone bill in many countries
…you apply for a banking loan in parts of Europe
…supermarkets place orders for goods in northern Europe
…school loans are processed in Sweden

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Garanti Bank
over 175 million transactions per day!

— Garanti Bank relies on CA Gen for their retail and private banking applications

— ATM back-office processing is performed by CA Gen applications

> Over last five years transaction volume has grown from 72 million transactions per day to 175 million

- Large portion is for ATMs; because there is no centralized clearing system for credit cards in Turkey, this is done by the bank themselves

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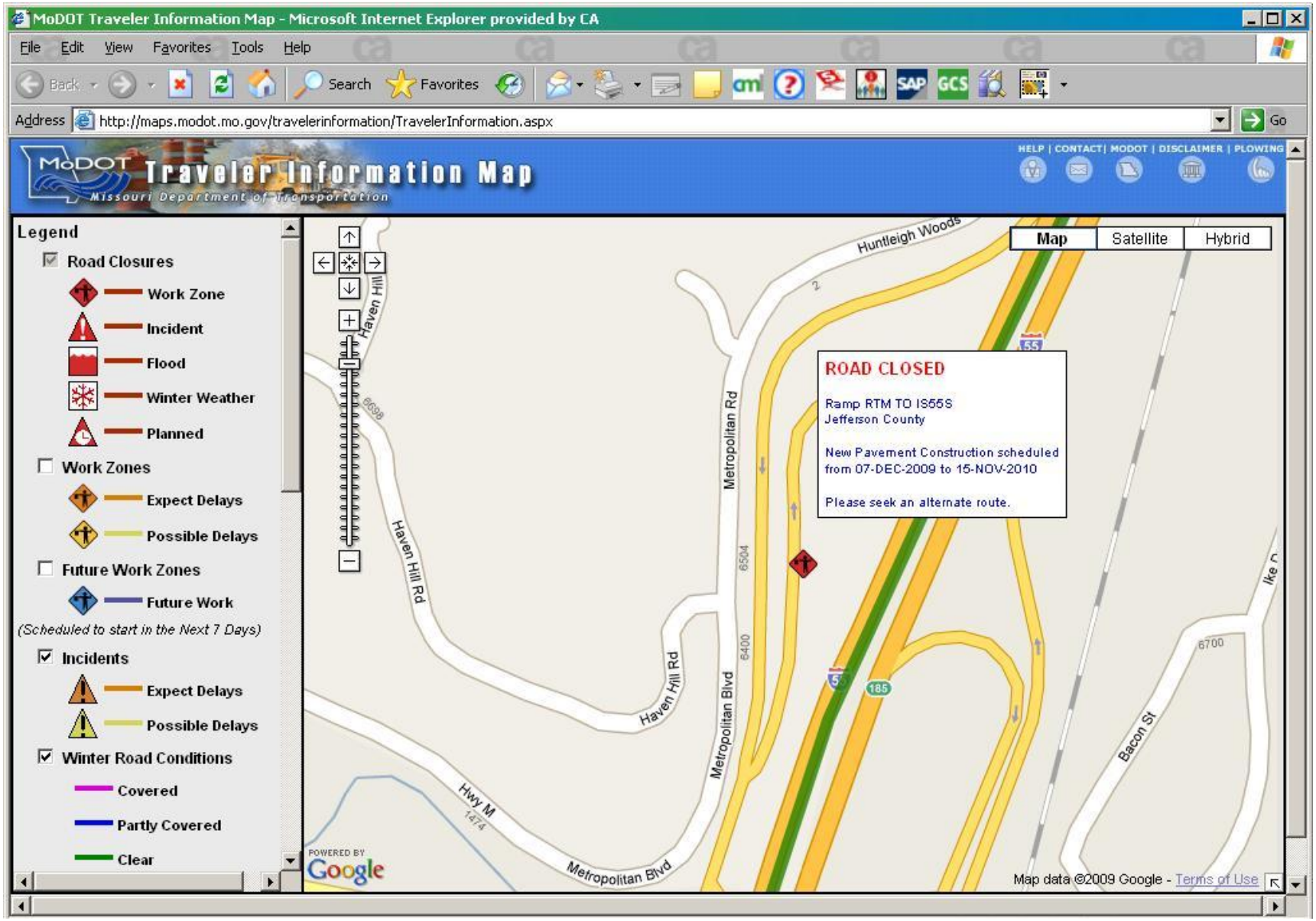
Missouri Department of Transportation
integrates CA Gen application with GIS software



Con-Way Freight SOA Strategy uses CA Gen

Con-way FREIGHT

CBD was a forerunner to what would later become SOA with different terminology...

...the CBD approach revolved around large-grain chunks of code, called components, which performed an identifiable task.

MAINFRAME Executive

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« Executive Summary: IT's Tower of Babel Sanity Check: Shallow Thinking Leads to Deep Regrets »

Con-way Freight's Modernization Journey Using SOA

Published by Publisher on November 12, 2009 in General.

By Alan Radding

Con-way Freight recently reached a milestone marking its arrival near the finish line of a decade-long journey to modernize its mainframe applications. This article reviews the company's efforts to find a way to make it easy to change and reuse its strategic applications while retaining the advantages of the System z. Today, the solution (and progress milestone) is obvious—Web services and Service-Oriented Architecture (SOA), but in 1996, when the effort began, SOA wasn't a widely embraced concept, especially where the mainframe was concerned.

Background

Subscribe to Mainframe Executive!

Type and Wait to Search

Monthly Archive

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airlines worldwide rely on CA Gen

- Over 40 airlines worldwide rely on Customer Loyalty Systems developed and maintained by CA Gen
  - American Airlines, Delta, Sabre, Unisys
- Passenger Revenue Accounting
  - SABRE Quasar
- Airline Cargo Management
  - Kale Consulting
- Maintenance Scheduling
  - TAP Air Portugal

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Ohio Bureau of Workers Compensation
SOA modernization and stepping into the cloud

Largest exclusive state-fund workers' compensation system in U.S. – with more than $19 billion in assets

- Developed over 100 web services using CA Gen
- CA Gen, combined with Enterprise Architecture Methodology from ENTARCO, has enabled dramatic improvements in:
  - Data integrity
  - Process consistency
- Benefits include:
  - Lower Cost
  - Shorter lead times
  - Lower maintenance costs

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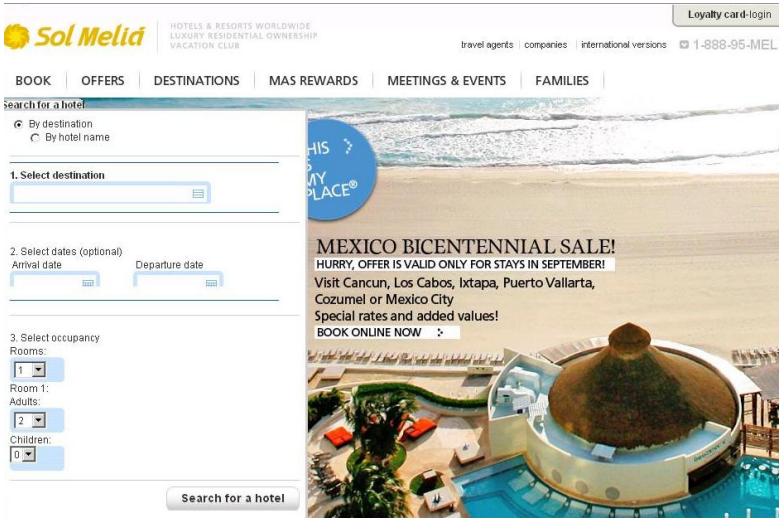
Sol Melia increased sales 200% with CA Gen



Sol Melia
HOTELS & RESORTS

"CA Gen allowed us to develop a highly robust web-based system that fully leverages our existing systems and those of our partners."

ERNEST JUANICO
Sistemas de Información
TRADYSO - Travel Dynamic Solutions

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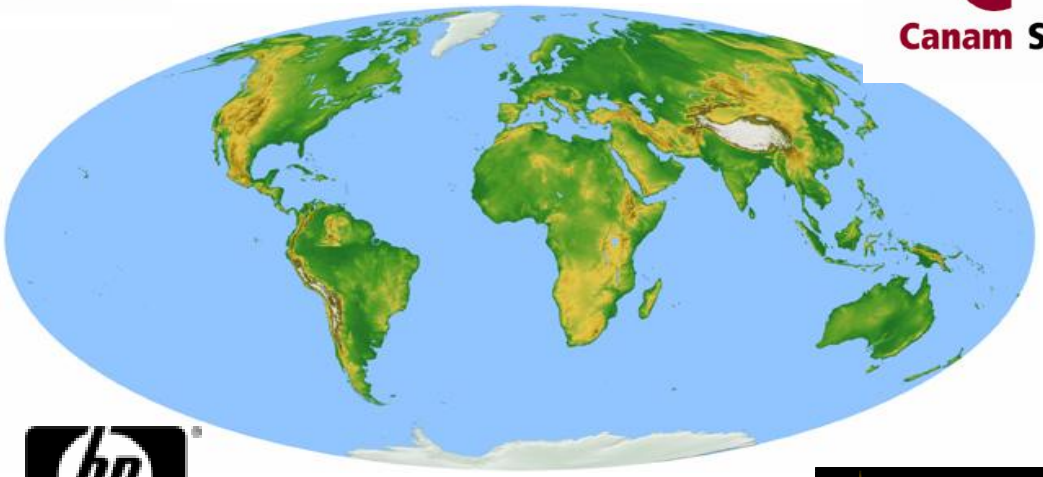
CA Gen worldwide ecosystem



Everware-CBDI
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EDGE Networking To Your Advantage
BYTES TECHNOLOGY GROUP
qat QA TECHNOLOGIES Questions Answered. Solutions Provided.
COOLProfs IT's all about people
Canam Software
Information Engineering Technology
jumar
WareSoft
KALE Industry Solutions, Customised Approach
CorTechs Inc Software Excellence
ENTARCO USA INC
AKRA
FACET
hp invent
IBM
FUJITSU
CITIZANT
SPS Software Performance Systems, Inc.
RESPONSESYSTEMS
EDUCAGEN
JIEC
accenture
APG ARIKAN Productivity Group
CSS Caterpillar Japan System Services Ltd.

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CA Gen 8.0 feature highlights

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CA Gen 8.0 feedback

"We are pleased with the web service implementation in CA Gen 8.0..."

"Looking forward to doing web services in CA Gen without using proxies."

"CA's direction is in line with where we are headed...we are especially interested in the HP-UX 64-bit Itanium support."

"We like the fact that we'll be able to use 3rd party (web) designers like Dreamweaver"

"...creating web services out of CA Gen will be a huge advantage for us."

"Looking forward to using multi-fetch for performance improvements."

"We are excited about the new web services support...this makes CA Gen 8.0 attractive to us."

"We're glad to hear about CA Gen supporting virtualization."

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benefits of CA Gen 8.0

- Modernize CA Gen user interface
- Extend web service publication and consumption
- Enhance web application delivery
- Increase developer productivity
- Improve performance of generated applications
- Reduce complexity and cost of migrating to new releases
- Introduction of CA Mainframe Software Manager (MSM) for easier mainframe installation

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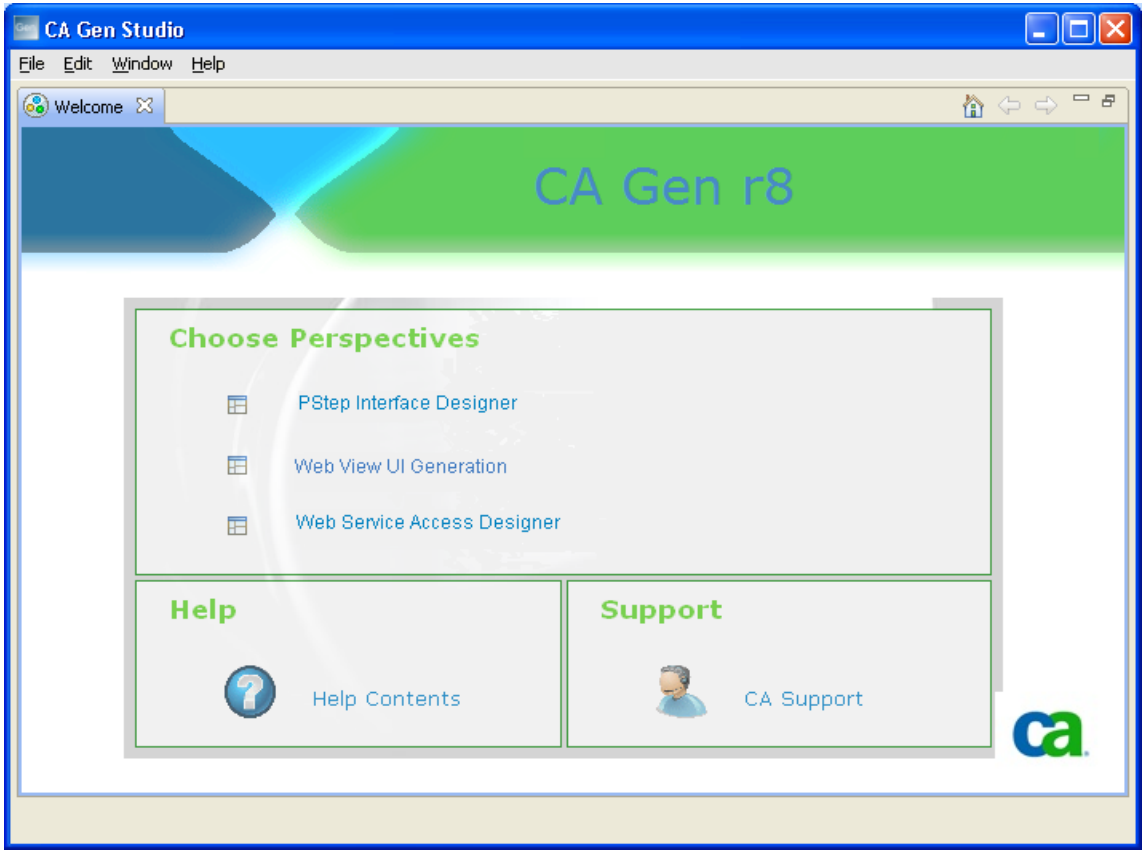
CA Gen Studio
a new design tool framework

Modernized and enhanced development environment based on Eclipse Rich Client Platform (RCP)

- Increases developer productivity
- Improves ease of use
- Industry standard UI broadens developer appeal
- Easily customizable



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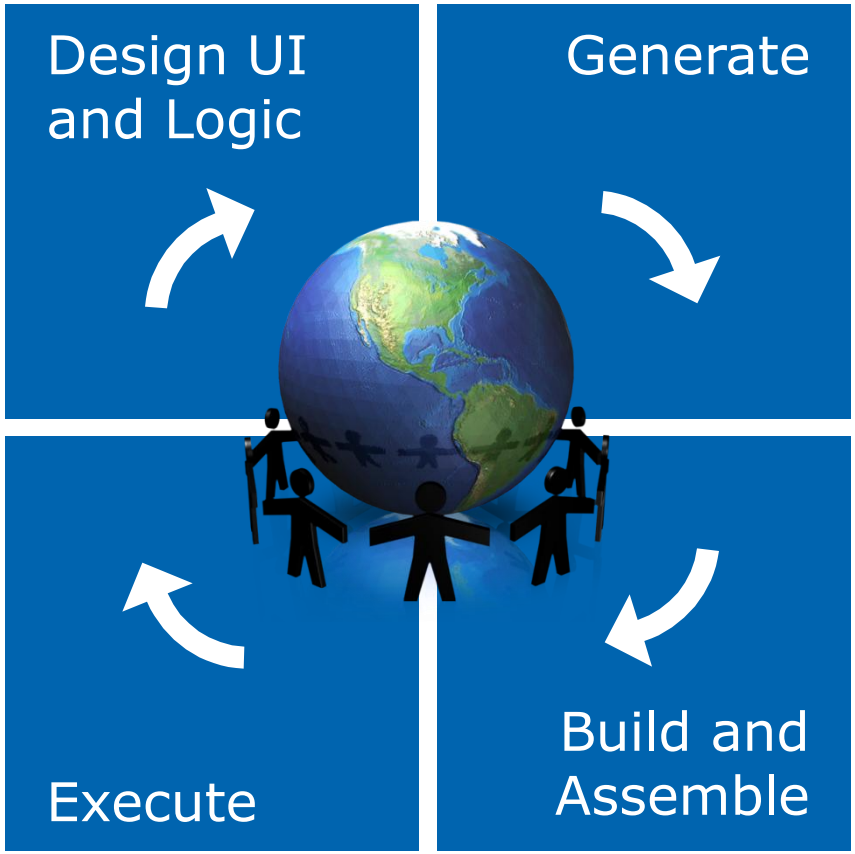
CA Gen Web View
create Web 2.0 applications using CA Gen

- Deliver rich and dynamic Web 2.0 applications
- Utilize Ajax to improve performance
- Execute on both Internet Explorer and Firefox
- Deliver "accessibility compliant" applications



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improve performance of generated Web applications

- CA Gen Web View improves performance of generated web applications
  - Overcomes challenges of existing Web Generation architecture such as using secondary threads
  - Reduces resource requirements on the Application Server
- ASP.NET Web Client enhancements
  - Improve ASP.NET web client application performance and user interface
  - Ajax is used to asynchronously update controls such as list-boxes
  - Customized themes can be used to change user interface characteristics of applications on the fly

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DBMS performance enhancements

- Multi-row/Block Fetch
  - Allows multiple rows to be returned in a single message from the DBMS
  - Initial reports indicate 60% improvement in CPU utilization
- Identity Columns
  - Allow simplified coding and more efficient method of generating unique values for key column
- In & Between clause
  - Simplifies coding of WHERE clauses

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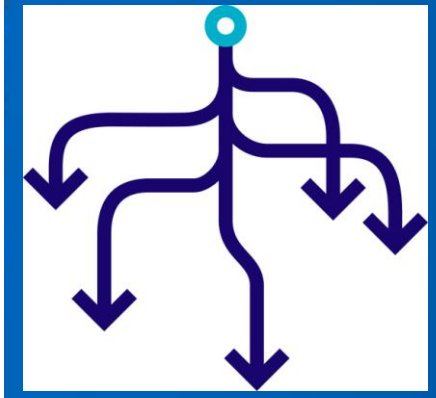
additional productivity enhancements

Support for larger models and subsets

- Object counts increased from 64K to ~1M per object type which enables creation of larger subsets and models
- Increases developer productivity and efficiency



Multiple Diagram Trace Utility (DTU)

- New GUI for tracing CA Gen applications
- Multiple DTU's can communicate independently with same server application
- Increases developer productivity and flexibility

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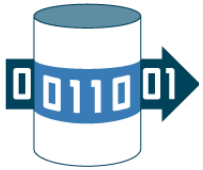
ongoing platform flexibility

Databases

DB2
Oracle
SQL Server
JDBC
ODBC
Datacom



Operating Systems

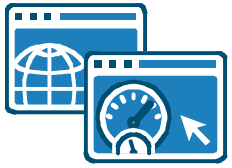
z/OS: CICS & IMS
HP-UX: PA-Risc & Itanium
HP-NSK: PA-Risc
AIX
Solaris
Linux (x86)
Windows

Languages

COBOL
JAVA
HTML
JSP
C#
ASP.NET
C

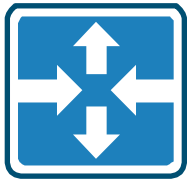
User Interfaces

Blockmode
Desktop GUI
Web
Proxy
Web Services



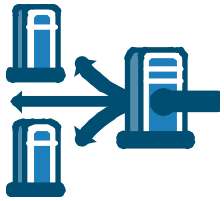
TP Monitors

CICS
IMS/DC
Tuxedo



Communication Middleware

TCP/IP
MQ
Tuxedo
ECI
SNA/LU6.2



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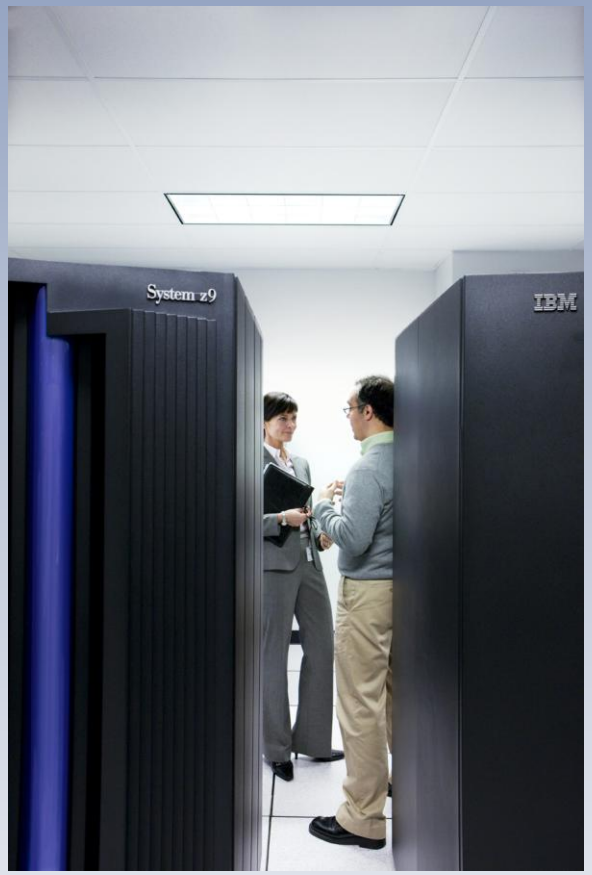
do you know...



What percent of CA Gen customers target the mainframe?

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mainframe efficiency improvements

- DB2 Bind enhancements
- z/Lib enhancements
- Dynamic Link of RI Triggers
  - Reduces memory footprint, load time

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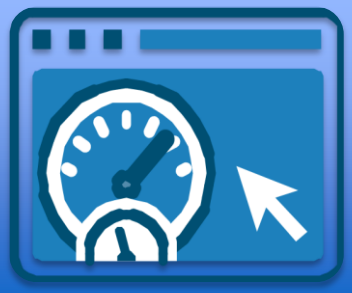
Mainframe 2.0 strategy



Provide a familiar (GUI) operating environment for software management activities

- Software acquisition
- Software installation
- Software deployment
- Control panel
- Configuration wizards

Drastically reduce the human intervention required to take a product from delivery to execution

- Capitalize on z/OS dynamic capabilities
- Introduce new system configuration functionalities
- Provide capability to easily move forward as well as back out

Standardize the acquisition and management of z/OS software

- Enhance CA products to use SMP/E and follow z/OS packaging standards
- Simplify and automate the selection and delivery of CA products and services
- Release Synchronization – create a unified CA software stack that is released on predictable intervals
- Continuously test the stack and validate against IBM's RSU

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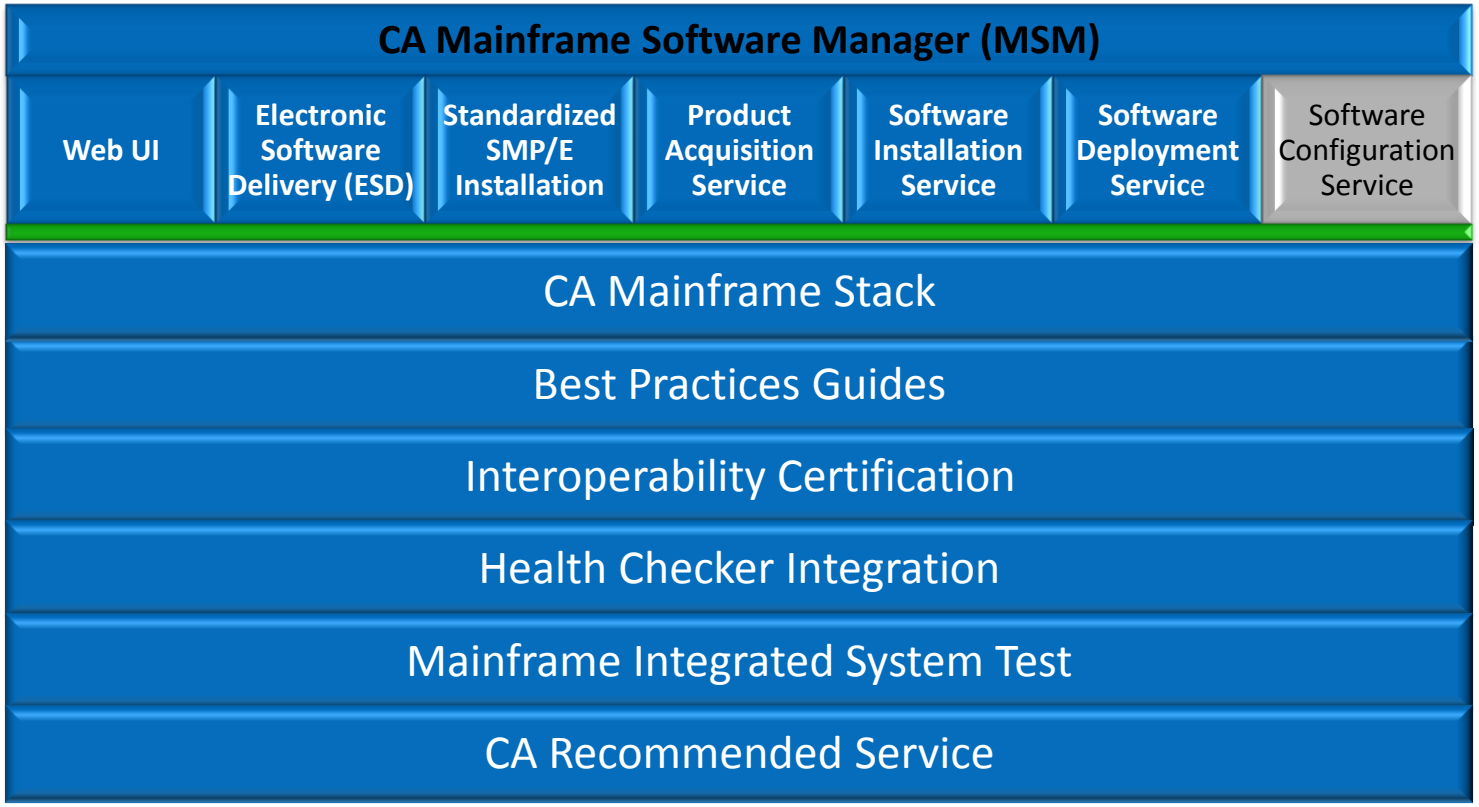
Mainframe Software Manager

Promises Made	Promises Kept
Simplify Management	Mainframe Software Manager Mainframe Stack



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application development trends and CA Gen vision

what does the future look like?

CA Gen vision

- Continue Enhancing Product Ease of Use
- Composite Application Development
- Application Modernization
- Embrace the Cloud
- Software as a Service
- Virtualization
- Lower Total Cost of Ownership

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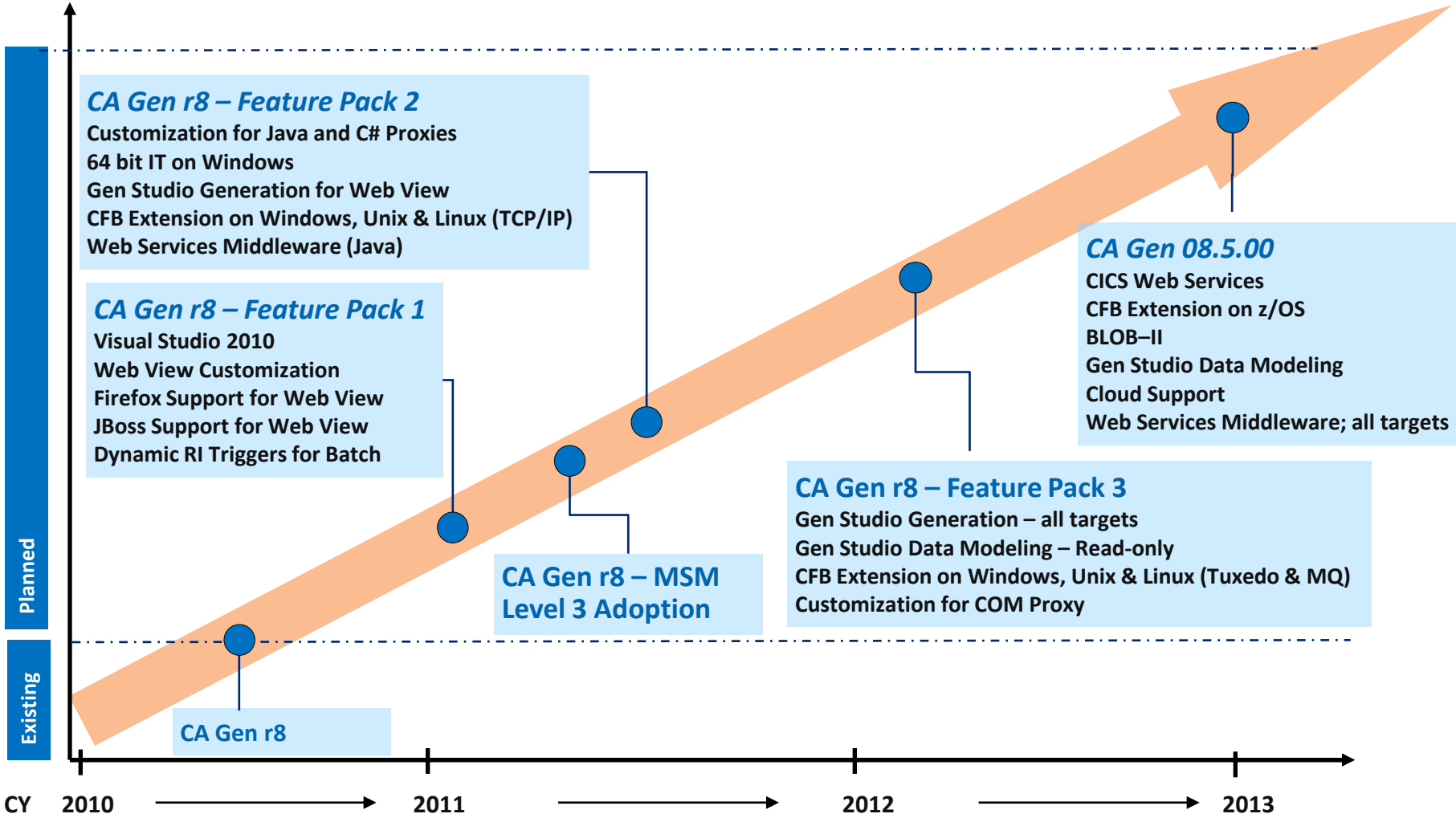
CA Gen roadmap moving forward



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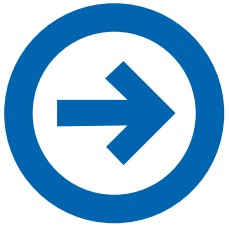
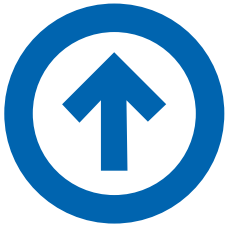
additional roadmap activities

- Certify generation of **cloud** enabled applications
  - 3Tera and Amazon will be initial offerings
  - White papers and sample code – “Using CA Gen 8.0 to Get to the Cloud”

- Investigating alternate **SaaS** pricing model for CA Gen
- **zEnterprise** certification
  - Researching new hypersocket connectivity APIs (pending release of IBM definitions)



- **Linux on System z** support based on business case identification
- **Itanium HP-NonStop** support based on pending contract



- **Mainframe 2.0** related requirements
- Platform, compiler, database, middleware certifications to keep up with **current 3rd party releases**
- Ongoing **DAR** reviews

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CA Gen and SOA

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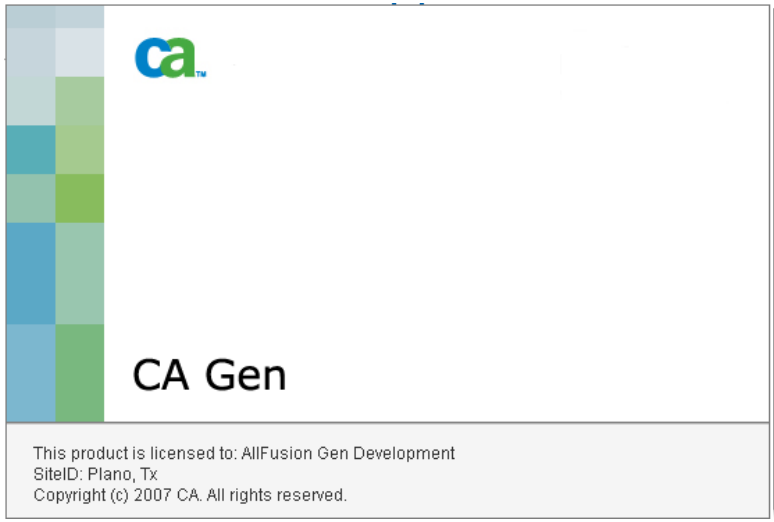
new SOA features in CA Gen 8.0



- Custom Web Service Interfaces
- .Net Proxy Web Services
- EJB Web Services
- Web Service Access

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SOA in CA Gen
new planned enhancements

CICS Web Services	Utilize native built-in CICS Web Services capabilities to expose CA Gen servers as Web Services on z/OS
Web Services Middleware	Enable CA Gen clients to use SOAP to communicate with CA Gen servers
Custom Proxies	CA Gen Studio's PStep Interface Designer will be extended to customize proxies in addition to currently supported EJB Web Services interfaces

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CA Gen and cloud computing

cloud computing defined

- **Forrester Research:**
  "A standardized IT capability, such as software, application platform, or infrastructure, delivered via internet technologies in a *pay-per-use* and *self-service* way."
- **Burton Group:**
  "The set of disciplines, technologies, and *business models* used to *render IT capabilities as on-demand services*."
- **CA:**
  "A style of computing in which dynamically scalable resources are provided as a service over the Cloud. Cloud computing is a usage-based model for enabling available, convenient, on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service provider interaction."

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why is cloud computing catching fire?

C-level executive focus on key qualities

Cost
Hardware/Software:

- Cloud computing delivers the same capability, with the same availability, reliability and other QoS *at less cost than traditional delivery of IT services*
- Cloud computing capability is priced in a *pay as you go* model
- There is a clear mapping of value back to cost

Cost
Operational Expenditure:

- Cloud computing reduces need for highly skilled *(expensive)* FTEs for managing infrastructure
- Allows the company to focus on their areas of expertise, delegating some workload to a provider who is expert at delivering that service

Cost
Agility, Competitiveness:

- Cloud computing enables a customer to rapidly add/delete capacity (elasticity)
- Cloud providers are focused on rapid deployment
- Reduces the “lost opportunity cost” in an ”ossified datacenter”

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the cloud: factors to consider

— Many factors should be weighed when considering "putting something in the cloud"
  - Security/integrity management
  - Availability
  - Disaster recovery/business continuity
  - Regulatory responsibilities

— What are your risk thresholds and needs related to these factors?

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achieving benefits of cloud computing
questions to ask

More modern	More agile	Less expensive - *pay as you go*	Meets SLAs	Stands up to regulatory scrutiny

- Will cloud enabling the application in question (*or portions of that application*) deliver these benefits?
- Can those benefits be equally achieved using other options?

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ca cloud-connected management suite: overview

- The **CA Cloud-Connected Management Suite** is a set of solutions to help IT leaders evaluate, compose, optimize and orchestrate resources to dynamically align their IT service supply chain with business requirements.

CA Cloud-Connected Mgmt Ste

Insight

Discover internal and external services, benchmark performance for comparison with alternatives. Uses Cloud Commons to understand what you don't know and provide situational awareness

Compose

Abstract existing services and components or build alternative virtual composite services and configurations to enable deployment into production

Optimize

Analyze alternatives across business measurement characteristics and present options to the user for how to improve

Orchestrate

Generate, simulate and deploy the virtual composite configurations that were suggested by Optimize

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types of Clouds

- Infrastructure-as-a-Service (IaaS)
  - Amazon
  - 3Tera
- Platform-as-a-Service (PaaS)
  - Microsoft Azure
  - Force.com
- Software-as-a-Service (SaaS)
  - SalesForce.com
  - Clarity
  - NetSuite

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using Amazon Web Services

- Create AWS account at aws.amazon.com
- Use AWS Management Console to select AMI to instantiate
- Remote Desktop to instance
  - Map local drives so that files may be transferred
- Install software / data
- Run
- We tested on an Amazon-provided Windows 2008 w/SQL Server Express, 32-bit
  - C Servers running under CA Gen 7.6 TE
  - CA Gen r7.6 Toolset

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using 3Tera

- Create a grid
- Provision an application instance from a template
- Remote desktop (windows) or ssh (Linux/Solaris) to the instance
- Install software / data
- Run
- Tested on 3Tera-provided Windows 2003 (hosting partner)
  - Installed SQL Server 2005 SP2
  - C Servers running under CA Gen 7.6 TE

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CA Gen cloud concepts being evaluated

- Toolset / CSE / TE as cloud instances
  - Users instantiate as needed
  - End user: instantiate instances up to license limits
    - Single point for PTF's
    - Cloud allows for hardware to be non-issue
    - Usage charges would be cloud specific
- Provide programmatic access to cloud APIs
- CSE Service
  - Not necessarily cloud

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CA Gen Education

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CA Gen on-demand webcasts
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- Application Modernization Framework
- Automate Repetitive/Competitive Development Tasks
- Building the Business Case for CA Gen
- CA Gen ASP.Net Application Enhancements
- CA Gen Best Practices: Deploying Web Apps and Web Servers
- CA Gen and Eclipse – A Bridge to Limitless Creativity
- CA Gen – Improve your Performance Management by Using the Latest Automation Tools
- CA Gen – Make Better Informed Decisions on the Scope, Scale and Timing of your Transition Activities
- CA Gen 8.0 MSM installation and deployment for z/OS
- CA Gen – Support Each Stage of your Component Architecture Process with Project Phoenix Architecture Analyser
- CA Gen 8.0 Web Generation Enhancements

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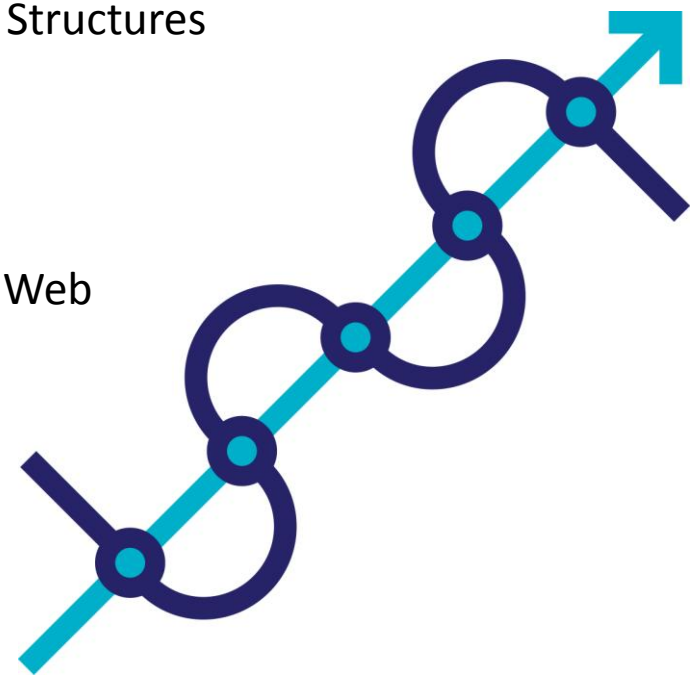
- Web Site Story – A CA Gen Love Story
- CA Gen – Explore how to Efficiently Create Components by Automating the Production of your Code and Data Structures
- CA Gen Studio Overview
- CA Gen Web View – Skins
- CA Gen – Reduce the Time to Convert from GUI to Web
- IET Product Update for CA Gen
- IET Tools Plug In for CA Gen Studio
- Introduction to xTrace
- SOA Architecture and Engineering Framework
- SOA for CA Gen
- Software Modernization - Reaching beyond state-of-the-art
- Using the Diagram Trace Facility



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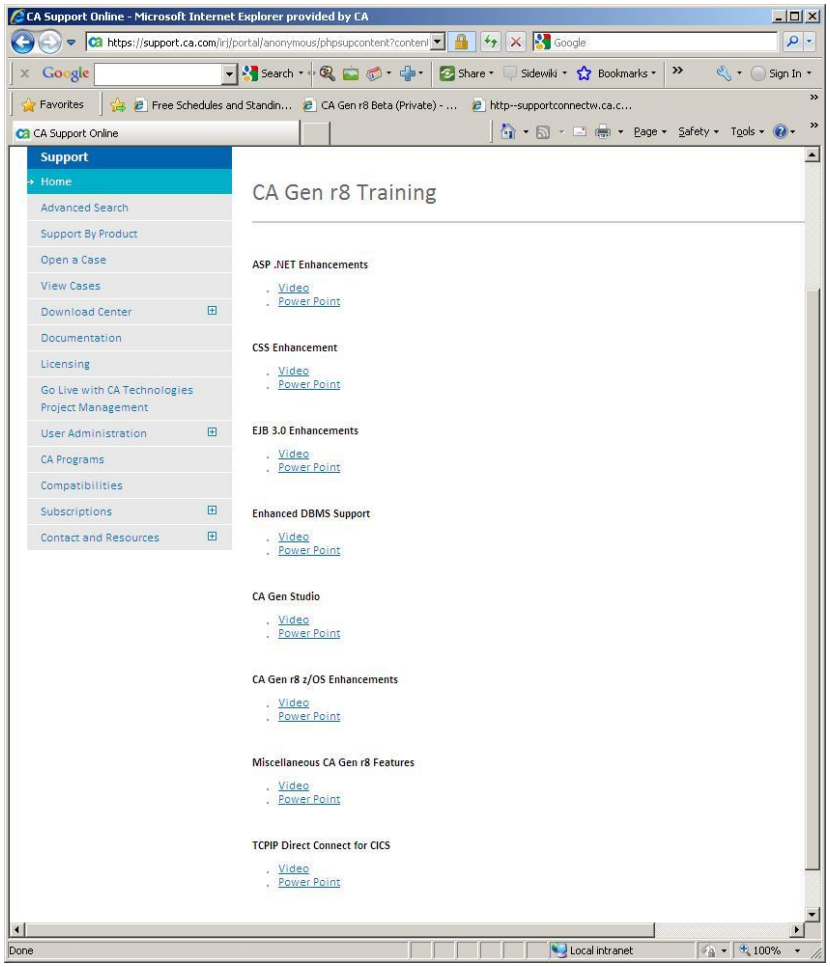
CA Gen 8.0 training



CA Support Online

- ASP.NET Enhancements
- CSS Enhancements
- EJB 3.0 Enhancements
- Enhanced DBMS Support
- CA Gen Studio
- CA Gen 8.0 z/OS Enhancements
- Miscellaneous CA Gen 8.0 Features
- TCPIP Direct Connect for CICS

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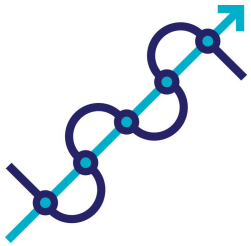
CA Gen education classes
QA Technologies http://qat.com

- CA Gen Block Mode Development
  - Development and testing of CA Gen block mode procedures and action diagrams, which will be integrated into screen-based applications. Emphasis is placed on the “practical” use of the CA Gen toolset.
- CA Gen Developing GUI Clients
  - Development and testing of distributed process GUI client applications using CA Gen. The course focuses client procedures, which can be integrated with CA Gen server procedures in GUI-based applications.
- CA Gen Developing CA Gen Servers
  - Instruction in the development of distributed process application servers using CA Gen. Development and testing of server procedures and action diagrams, which can be integrated into GUI-based applications or invoked by different client types through the use of CA Gen proxies.



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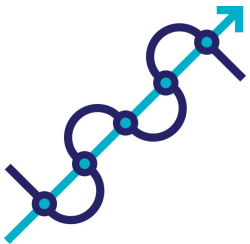
CA Gen education classes
Educagen http://educagen.com

- **Introduction in CA Gen** -This course will give an introduction to CA Gen and the way it is used in application development. The student will be able to communicate with the developers using a common CA Gen language.
- **Basic Developer 1 and 2** - The student is trained to become an application developer using CA Gen. Window, Block Mode (3270), Batch, Web or/and Server applications (customer preference) will be built. He will get a good knowledge of modeling in CA Gen. He will have the practical skills to start in a CA Gen development project.
- **All Round Developer** - The student will be trained to become an All Round Developer who has a very profound knowledge of CA Gen and the principles of modeling in CA Gen. He has more and better practical skills than the Basic Developer. A greater CA Gen area is part of his competence so that he is immediately available for different aspects of a CA Gen project.
- **CA Gen for the Tester** - Testers of CA Gen applications will be provided with a good understanding of the concepts of CA Gen. The student will learn how a system is developed using CA Gen. He will practise to use the CA Gen terminology to optimize a good communication with the designers and developers of the system.



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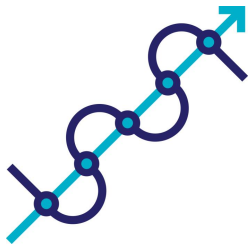
CA Gen education classes
Educagen http://educagen.com

- **CA Gen for the Designer-Analyst** - The student is trained to model the results of analysis and functional design in CA Gen to enable the developers to build the systems. An introduction in CA Gen is included to provide the student with the knowledge to communicate easily with the application developers.
- **Model Manager** - The Model Manager is responsible for all actions with the model. The student is trained to become a model manager. Main subjects are subsetting, version control and model management strategy.
- **Version Control** - The student will be able to understand, plan and execute version control activities. He will be able to develop and apply the model management strategy, to manage the models and perform additional tasks.
- **Subsetting** -The student is provided with all knowledge and skills to be able to work with all aspects of subsets. The student will learn how subsets for specific project tasks have to be defined and how they can be used effectively.



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Educagen http://educagen.com

- **CA Gen for the Database Administrator (DBA)** - The DBA will get an introduction in CA Gen to become familiar with the whole CA Gen area. He will learn how the database performance of the CA Gen generated system can be influenced and improved by a good design of the DB. On completion the DBA will be competent to discuss with the developers about the DB-action statements.
- **Component Based Development (CBD)** - The student will learn to specify components, to implement and publish them according the principles of Component Based Development (CBD).He will be able to develop applications using predefined components.
- **DB2 for the CA Gen Developer** - The student will learn which features of the database management system DB2 are available for CA Gen and how CA Gen makes use of these features. The developer of CA Gen applications wil be able to build more effective and efficient DB actions in CA Gen.
- **Other courses**
  - improve performance of CA Gen applications
  - capita selecta
  - developer web systems
  - tailor made courses on demand

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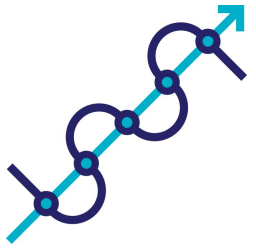
CA Gen education classes
Jumar Solutions http://jumar-solutions.com

- **SOA4Gen workshop** Aimed at IT architects and development management, Jumar and Everware-CBDI have created SOA4GEN - a workshop style training course which enables enterprises that have heavily invested in CA Gen to more readily adopt Service Oriented Architecture (SOA), the business driven architectural style that implements high levels of componentisation in order to deliver more agile, cost effective support to information and business processes.

- **Developing CA Gen Servers -** Aimed at application developers new to CA Gen, this course starts with an introduction to the concepts of model based development, client server styles and the different parts of CA Gen and how they fit into an application development lifecycle. It then covers all the necessary steps to take you from analysis through to construction of server side code using CA Gen. It also includes use of CA Gen's productivity tools to help developers work faster.

- **Developing CA Gen GUI Clients -** Aimed at application developers and following on from the "Developing CA Gen Servers" course, this course explains the action diagram statements used in event processing to control the user interface, how to design windows and how to set up the dialogs between different procedures. It also explains how to use templates to aid productivity and details of packaging, construction and testing with CA Gen.

- **CA Gen Web Generation and Proxies –** A common cost effective way of transitioning your application to the web is to leave the server environment of an existing application as is and deploy the client to the web. This scenario is explored first to illustrate a possible migration approach. The course then takes web generation further with information on how to deploy CA Gen servers as EJBs and deployment options to popular application servers are discussed.



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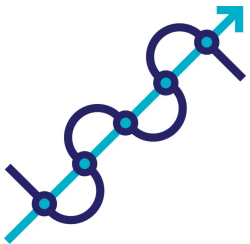
CA Gen education classes
Jumar Solutions http://jumar-solutions.com

- **CA Gen Encyclopedia Administration** - The Encyclopedia Administrator course provides CA Gen developers with the information they require to make the transition to encyclopedia administrators and model managers. The course describes the types and purpose of the different CA Gen encyclopedias and discusses its role in the development process.
- **CBD Overview** - Aimed at non developers, this course explains the origins, key features and benefits of CBD. It then moves on to introduce component architectures, different architecture patterns and their importance in making CBD successful. The second part of the course explains how CBD is implemented in practice, using CA Gen, covering the specification of a component, implementing a component and consuming a component.
- **CBD with CA Gen** - Aimed at CA Gen developers, the first part of the course explains the origins, key features and benefits of CBD. It then moves on to introduce component architectures, different architecture patterns and their importance in making CBD successful. The second part of the course explains how CBD is implemented in practice starting with introducing the component and interface related objects in CA Gen and the CS/3.x standard. The course then covers the practical aspects of CBD using CA Gen, taking developers through practical exercises to specify a component, develop the implementation and then consume the component.



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CA Gen education classes
Everware-CBDI http://everware-cbdi.com

- **Learning the Ropes™** Developing and Using Components in CA Gen
- This hands-on training class prepares developers for participation in a Component Based Development (CBD) project. This course teaches CBD through practical examples and allows students to actively participate in building and using components. Delivered as computer-based training.

- **Blazing the Trail** Architecting Components in CA Gen
- In this class, students obtain a set of guidelines to scope, define, and specify components, receive an overview of architectural styles, and review the challenges in building and implementing a component architecture.

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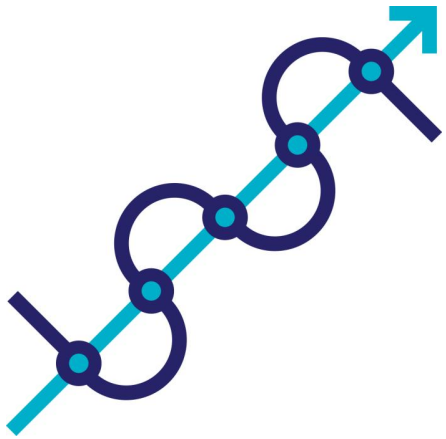
CA Gen education classes
AKRA http://www.akra.de

- Model Based Client/Server Development using CA Gen
  a. Management Overview - 1 day
  b. Analysis with CA Gen - 2 days
  c. Design with CA Gen - 2 days
  d. Construction with CA Gen - 2 days
- Short Track Application Development with CA Gen – 5 days
  – Combination of b, c, d



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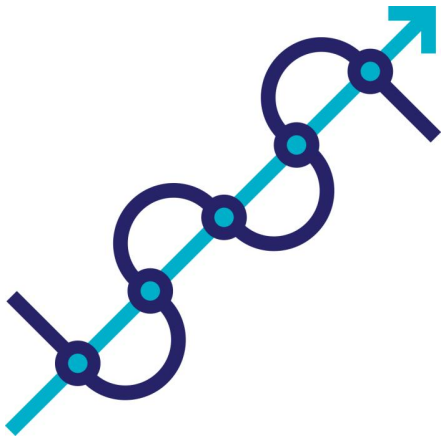
Ameritas Ltd
http://ameritas.co.uk

Over 100 catalog courses available on

- Application Development Lifecycle
  a. Methodologies and Approaches
  b. Application Architectures
  c. Database Design and Maintenance
  d. Programming and Development Languages
  e. Use of Tools and Applications



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CA Gen – staying connected

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CA Gen customer meetings worldwide

City	Dates
Paris	23 September
Oslo	28 September
Stockholm	29 September
Helsinki	30 September
Hamburg	30 September
Amsterdam	5 October
London	7 October
Tokyo	4 November
Malaysia	TBD
Thailand	TBD
Singapore	TBD
Canberra	18-19 November

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stay connected to other CA Gen users!

CA Gen Global User Community

http://twitter.com/ca_gen

http://linkedin.com/

http://edgeusergroup.org

http://gentalk.biz

http://ca.com/communities (look under "mainframe")

http://duick.com

http://flickr.com/ (ca_gen)

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CA Gen worldwide user groups

http://ca.com/communities/

- Benelux User Group
- German User Group
- UK and Eire User Group
- Denmark User Group
- Finland User Group
- North American User Group
- Australian User Group
- Japan User Group

Benefits

- Learn about educational webcasts
- Networks with CA Gen development experts
- Learn about local and global events
- Prioritize and vote on product enhancement requests
- Network with users through online forums

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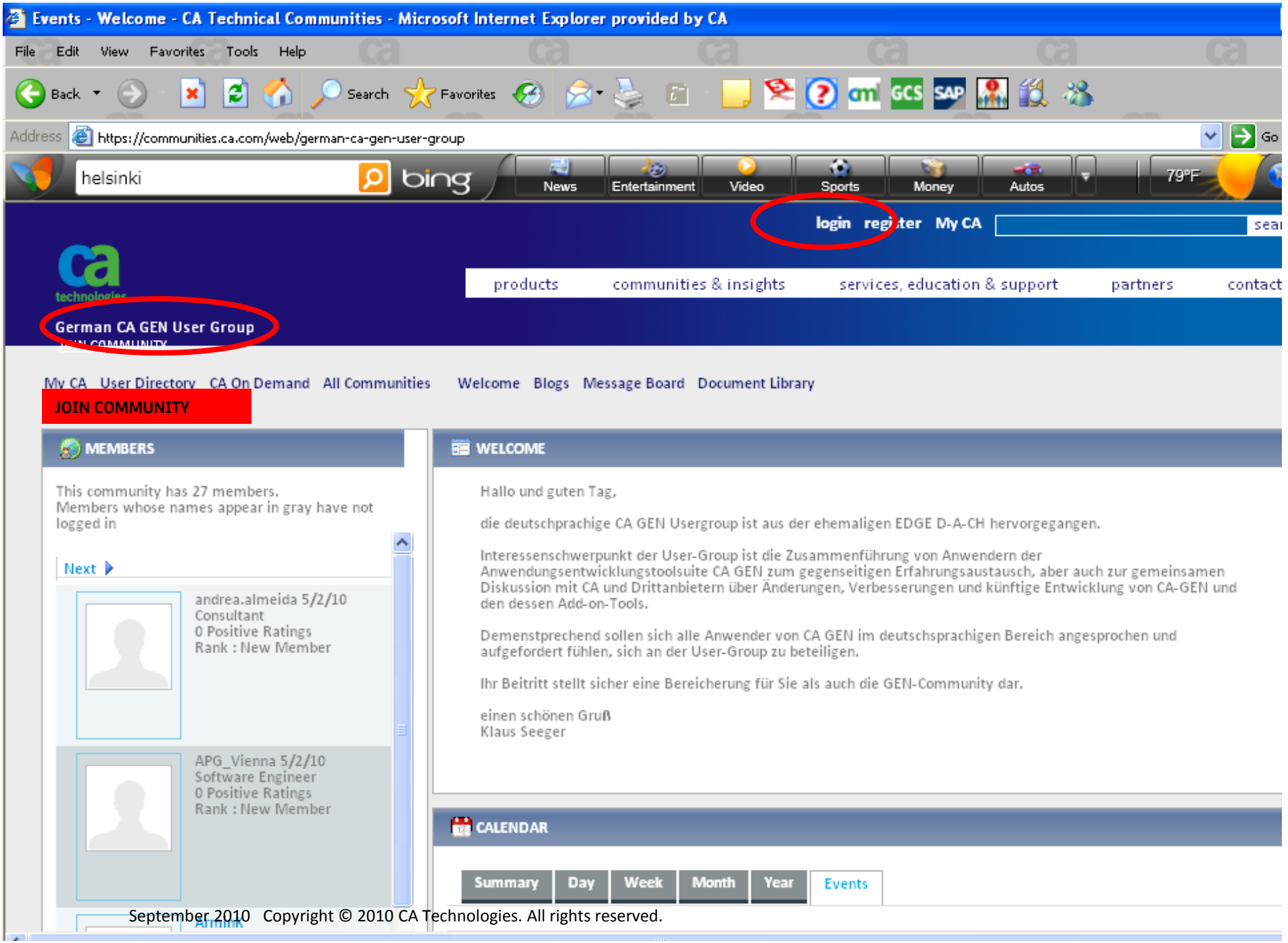

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questions and answers

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thank you

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