CISOA 2021

CCC Technology Center Update
Mission

To facilitate and lead technology projects for the Chancellor’s Office to achieve savings through economies of scale and system-wide coordination.

- provide project leadership
- administer system contracts
- provide technology services
- publicize the progress of projects
Tech Center History

1997
4CNET Grant
(precursor to CENIC)

2003 – 2012
CCC Technology Center Grant
CENIC – Statewide Fiber Optic Network
CCCApply – Common Application for Admission
Systemwide Technology Infrastructure
Hosting and Listserv
Centralized Library Content
Technology Governance (SAC / TTAC)
TechEDge
eTranscript California
California Virtual Campus (Now OEI)

2013 - 2017
Education Planning Initiative
Common Assessment Initiative
Online Education Initiative
CCC Information Security
CCC Accessibility Center

2018 - 2020
Shared Infrastructure Program
Core Applications Program
Data Services Program
PMO
Enabling Services
Begin with the end in mind...  
- Steven Covey

Today’s Need

Clarify the path.

Help students choose and enter a pathway.

Help students stay on the path.

Ensure that students are learning.
CCC System-wide Technology Platform
CalREN Network Extending to Northern CA
CENIC Budget Change Proposal

- $8M in Governor’s Budget to address...
  - Year over year exponential growth in internet usage
  - Rising CENIC service costs
  - Inequities in connectivity across the state, especially for rural colleges
  - The lack of viable backup circuits and poor connectivity in some areas
Future-proofing the Network

10 Gig Upgrade of primary & secondary circuits/equipment to colleges

Ensure 1 Gig primary & secondary circuits at approved off-site centers.

Upgrades FY15-16 through FY21-22

Network should have sufficient capacity for at least 5 years at current annual demand acceleration.
Circuit Upgrade Progress

<table>
<thead>
<tr>
<th>Number of Circuits in Production</th>
<th>347</th>
</tr>
</thead>
<tbody>
<tr>
<td>10Gb</td>
<td>196</td>
</tr>
<tr>
<td>1 Gb</td>
<td>142</td>
</tr>
<tr>
<td>&lt;1GB</td>
<td>9</td>
</tr>
</tbody>
</table>

282 Circuit Upgrades Completed
Working to eliminate duplication of systemwide accounts... (currently ~0.003%)

- passed to the college to help eliminate local duplicates

- helps tie student data together systemwide

+11 Million OpenCCC Student Accounts

Student ID
CCCID ASX2456
OpenCCC - New for Summer 2021

Text / Email Validation

Create Your Account

Enter your mobile phone number to begin creating your MyPath account. You will receive a code via text message to verify your identity and keep your account secure.

Mobile Phone

For international numbers insert + before country code

Use email instead

Text My Verification Code

Simplified Password

Forgot Your Password?

Which contact method do you want to receive a password reset? *

- Email - send me an email to mca***@ccctechcenter.org.
- Mobile phone - send me a text to *******1881.
- Helpdesk - send me to support

Next
Student Support

24/7 On-Demand Call Center

- 7000+ Calls per month
- 60-Second Call Response Time
- 95% Student Satisfaction Rating
- 90% First Call Resolution
- Spanish Language Support
- Ticketing System - ZenDesk for Email and Phone

Community-Based Support

- Ask a Question,
- Share and Idea,
- Report a Problem,
- Give Praise

Reduces calls to the college. Answers for Admissions, Financial aid, Transfer, etc.

- Promotes dialogue about problems
- Facilitates continuous improvement
CCCApply Suite

- Standard Application
- International Application
- California College Promise Grant
CCCApply Suite Updates

Summer 2019
Non-Credit Application
Glue for CCCApply Downloads

Fall 2019
Mobile Interface

Spring 2020
Spanish
Access to in-process application data

This year
Integration with new OpenCCC Account

(SSN removed from OpenCCC)
Fraud filter updates
Fraud Filter

If you mark fraud (like email spam), it’s 99% accurate. Otherwise it’s 96% accurate. Continuously improving and preventing thousands of bad applications from getting through.

Weekly updates -> Daily updates to catch trends faster

Investigating 3rd party products that add signals in human behaviour and environmental factors
Dont give away email & services

Just checked my los rios email and got this notification. Now no benefit of applying for los rios anymore. They have restricted the access to enrolled students only.

- **Los Rios Gmail** – Effective immediately, Los Rios Gmail accounts can only be used for messaging within Los Rios until you enroll in your first class. This

- **Google Docs and Drive** – Effective immediately, access to Google Docs and Google Drive will be limited to students who have already enrolled in our colleges. As soon as you enroll in your first class, you will have access to...
MyPath is the student GPS in a Guided Pathways Framework

- Closing the ~70% attrition rate after CCCApply and before enrollment
- Career and program exploration
- A structured pathway tailored to each student
- Just-in-time and follow-up messaging to stay on the path

- Now 61 Colleges Have Adopted
Students have completed millions of advisor cards.
Welcome to Career Coach

Discover majors and in-demand careers and education based on your interests!

Take Career Assessment
Take a Career Assessment to learn about yourself and Career Coach will give you career suggestions based on your interests.

Take the Assessment

Browse Careers
Browse or search for careers and we will give you relevant data on wages, employment, and the training you need.

Search for Careers
Or Browse all Careers

Browse Programs
Browse or search for the available programs that lead to the career you want.

Search for Programs
Or Browse all Programs

Are You a Veteran?
Find civilian careers related to your military occupation.
Get Started with Military Search
MyPath New Features

Deliver and Gather Documents to/from Students

• Residency
• Financial Aid
• Special Programs

Integrating with the SIS

• Orientation, Admission status, Ed Plan status, and Enrollment status
eTranscriptCA Overview

- Statewide Internet-based system for requesting, viewing and transmitting electronic transcripts
- Released July 2007
- Built on California Electronic Transcript Standard
- 103 higher education institutions
  - CCC, CSU, UC, Privates
- More than 2 million transcripts have been exchanged across California's postsecondary systems
eTranscriptCA and Cradle to Career
Multiple Measures

Multiple Measures Placement Service (MMPS) Workflow

1. Collect
2. Generate
3. Deliver
COCI Overview and Focus Areas

Overview

- Review & approval to assign a Course Control Number to courses and programs offered by Colleges.
- Replaces a legacy application (Governet).
- Development began in March 2016
- CCCCCO wants Commercial off the Shelf (RFP in Process)

Focus

- Advance the platform with new features developed based on CCCCCO priority.
- Currently on hold for RFP.
C-ID Overview and Focus Areas

Overview

• Approval workflows for ASCCC to assign (C-ID numbers) to transfer courses. C-ID addresses the need for a “common course number” by providing a mechanism to identify comparable courses.
• Individual college courses are compared to the minimum requirements set by the descriptors

Focus Areas

• New features developed based on ASCCC priority.
Project Glue / Super Glue

• SuperGlue (62 Colleges)
• A development project of the CCCTC designed to provide an integration infrastructure for software designed, built, or purchased by the CCCCCO.

• (Super)Glue includes:
  • An extensible data adapter, initially designed to integrate with ERP systems, called the College Adapter
  • A standardized set of data objects (student, course, terms, etc..)
  • And a data quality model built around Master Data Management
SuperGlue

Amazon Web Services

CCC MyPath (On-boarding Experience)
OpenCCC (Account Creation)
Career Guidance → CCC Apply → Financial Aid → Orientation → Create Ed Plan → Enroll In Courses

MyPath Common Services
- Rules Engine Service
- Recommender Service
- Comms Service
- Document Service
- ... Future Services

SuperGlue

External Service Adapters
- Ethos
- PeopleSoft
- Canvas
- CDE (CCCiD - SSId)

Zuul API Gateway
Conductor
MDM

Student Profile Service
Data Lake Services
CCC Data Lake

Core SuperGlue Services
Restful Web Service – micro service preferred
Future Services, TBD
External Service endpoints
“Many data and analytics leaders think of data hubs, data lakes and data warehouses as interchangeable alternatives. In reality, each of these architectural patterns has a different primary purpose. When they are combined, they can support increasingly complex, diverse and distributed workloads.”

Gartner - Data Hubs, Data Lakes and Data Warehouses: How They Are Different and Why They Are Better Together
Published: 13 February 2020
The CCC Data Platform (in production)
CCC Accessibility Center

• Technical Expertise
• Policy / Strategy Guidance
• Training and Self-paced Courses
• Implementation Solutions specific to:
  • Information and Communication Technology accessibility
  • Alternate Media
  • Assistive Technology
• Resources

cccaccessibility.org
Web Developer Instructional Videos

- Web Developer Tutorial Videos
- Well-formed and Valid Markup
- HTML Headings
- SourceOrder vs DisplayOrder vs KeyboardFocusOrder
- Keyboard Focus
- Accessible Form Instructions
- Explicit and Implicit Form Labels
- Identifying Required Form Fields
- Using the Fieldset and Legend Elements
- Checkboxes and Radio Buttons
- Error Messages in Forms
- What Is Aria And Why Use It
- Aria-labelledby vs. Aria-describedby vs. Aria-label
- Aria Landmark Roles
- How Not To Use Aria
- Using Aria-live
- Accessible Timeouts

cccaccessibility.org
Web Development Resources

Evaluating Web Content
• Automated Tools
• Manual Testing
• Web Browser Tools
• Color Contrast Tools
## CCC Accessibility Center

<table>
<thead>
<tr>
<th>Other Projects</th>
<th>Update</th>
</tr>
</thead>
</table>
| Pope Tech Website Accessibility Scanning & Monitoring Tool | ● Free service to colleges  
● Tool scans & evaluates public-facing website content  
● Supports multiple users & can scan as many pages as needed  
● Contact accessibility@cccnext.net for access |
| Accessibility Help Desk                             | ● Free to the colleges  
● Available to conduct small to medium accessibility reviews for college websites and content (e.g., 10-15 pages).  
● See https://cccaccessibility.org/resources/acc-help-desk |
CCC Security Center

• Vulnerability Management - Tenable Security Center
• Central Logging - Splunk
• Data Loss Prevention - Spirion
• Unlimited SSL Certificates - InCommon Certificates
• Security Awareness Training - SANS Securing the Human
• Information Security Assessments - Penetration testing
  • ~95% colleges compromised during test
  • Able to access all of Colleges data including root access to several SIS
CCC Security Center

- Governance
  - ISAC committee
- Security Policy and procedure templates
- Twice yearly Information Security Workshops
- College assistance & expertise
- CCC Technology Center Internal Security
  - Dynamic analysis
  - Static analysis
  - Incident response

cccsecuritycenter.org
Software Development

CCCTC Total Quality Management Process

Sprint Process (CI/QA)

- Regression Test
- Unit Test
- User Story Integration #1
- Functional Test
- Security Review
- Smoke Test

End of Sprint Process (QA)

- Smoke Test
- Unit Test
- Incremental Demonstration / Socialization

Component Complete Process (QA)

- End of Sprint Demo
- Component Complete
- *Accessibility Review

Release Readiness Process (Beta)

- Regression Test
- *Accessibility Review
- Security Review
- Release Management Process

Release Readiness Process (Pilot)

- Initial ES Configuration Testing
- *Beta Test
- Release Management Process
- *Site Specific ES Configuration Testing
- *Pilot College Exercise
- Release Management Process

Adoption Readiness Process
CCCTC Project Management Office

PMO Mission:

To facilitate processes, communication, reporting, and transparency for the purpose of empowering the organization in making fact-based decisions on programs, projects, and initiatives, improving overall organizational outcomes.

PMO Outcomes:

• Improved project quantification, budgeting, tracking, and predictability through introduction of PM best practices.
• Improved team velocity through appropriate planning, removal of roadblocks, and active risk management.
• Improved accountability, decision making, and interventions through development, monitoring, and reporting of KPIs.
• Improved cross-organizational collaboration.
• Improved quality of project results.
Project Management of CCCTC Portfolio

- PMO PM staffing of development projects, including COTS product selection and readiness projects.
- Management of “triple constraint”
- Facilitating completion of CCCTC PMF artifacts.
- Coaching teams on PM best practices.
- Maintaining PMO project wiki pages.
- Project artifact templates
- KPI reporting
Dashboards / KPIs

- Conversations based on data.
- Quick identification of problem areas needing attention.
- Focus on solutions.
- Track superset of KPIs. Can roll up or summarize various ways depending on audience.
- Product Dev, Production Ops, etc.

### CCCTC Product Development Status Dashboard

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Funding Source</th>
<th>Product Director</th>
<th>Product Owner</th>
<th>Project Manager</th>
<th>Project Scope</th>
<th>Project Schedule</th>
<th>Project Resources / Budget</th>
<th>Risk #</th>
<th>Comments</th>
<th>Last Update Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open CDC 18/19</td>
<td>CAP</td>
<td>Jennifer Coleman</td>
<td>John Ellis</td>
<td>Joe Johnson</td>
<td>YELLOW</td>
<td>GREEN</td>
<td>GREEN</td>
<td>R1, R2</td>
<td>Project scope is yellow due to lack of CD sign-off on project initiation docs. As per discussion on 3/4/19 (reg ret) and project scope is yellow due to lack of CD sign-off on project initiation. Current release is set to 4.28.19</td>
<td>6/26/19</td>
</tr>
<tr>
<td>MyPath 18/19</td>
<td>CAP</td>
<td>Jennifer Coleman</td>
<td>Mike Capello</td>
<td>Joe Johnson</td>
<td>YELLOW</td>
<td>GREEN</td>
<td>GREEN</td>
<td>R2</td>
<td>Project scope is yellow due to lack of CD sign-off on project initiation. As per discussion on 3/4/19 (reg ret), project scope is yellow due to lack of CD sign-off on project initiation. Current release is set to 4.28.19</td>
<td>6/26/18</td>
</tr>
<tr>
<td>CCCApply 18/19</td>
<td>CAP</td>
<td>Jennifer Coleman</td>
<td>Patty Donath</td>
<td>Dean Edmonds</td>
<td>YELLOW</td>
<td>GREEN</td>
<td>GREEN</td>
<td>R1</td>
<td>Project scope is yellow due to lack of CD sign-off on project initiation. As per ongoing discussions about this, CCC is looking into strategies for submitting a draft to OAD. Current release is set to 4.28.19</td>
<td>7/15/19</td>
</tr>
</tbody>
</table>
Communications

Project Level Communications Support

- Listservs
- Websites
- Email Campaigns
- Surveys
- Workshops
- Conferences

In Coordination with

- CCCCCO Communications
- FCCC Communication
- CCCCCO Branding
- Enabling Services (Sales)
Enabling Services

- Your Implementation Project Manager
  - Coordinate all tasks
  - Assign ICE skill to each task
  - “least touch” approach
  - Streamline deployment activities

- Technical Implementation Work
  - Highly trained technicians
  - Installation of software
  - Product configuration/ scripts
  - Validation testing
  - Network configuration

- Single point of Contact
  - 30-40 assigned colleges
  - Overall relationship manager
  - Support Colleges/Districts

- Tools:
  - CRM system
  - PM/Task Mgmt
  - Reports
  - Dashboards

- Enabling Services

- “IPM” Implementation Project Managers (central point of contact)

- “ICE” Implementation/Configuration Engineers

- “CRM” College Relationship Managers

- TPD Training and Professional Development

- Product coordination
  - Internal PD training
  - Coordinate college staff with Grant PD Programs
  - ES Operations
## CCCTC Product Usage Report

<table>
<thead>
<tr>
<th>CCCTC Product</th>
<th>Sold/Signed Up</th>
<th>In Progress</th>
<th>Installed</th>
<th>Live</th>
<th>Total</th>
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<tbody>
<tr>
<td>CCCApply California Promise Grant</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>37</td>
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<td>7</td>
<td>2</td>
<td>19</td>
<td>28</td>
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<td>CCCApply Noncredit Application</td>
<td>10</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>19</td>
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<td>CCCApply Standard Application</td>
<td>0</td>
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<td>116</td>
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<td>CCC MyPath</td>
<td>3</td>
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<td>4</td>
<td>44</td>
<td>61</td>
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<tr>
<td>Data Warehouse Report Server</td>
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<td>64</td>
<td>10</td>
<td>96</td>
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<td>eTranscript California</td>
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<td>58</td>
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<td>7</td>
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<td>Shibboleth IdP</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>114</td>
<td>114</td>
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<tr>
<td>SuperGlue College Adaptor</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>51</td>
<td>62</td>
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<td>Unlimited SSL Certificates</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>69</td>
<td>69</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28</strong></td>
<td><strong>91</strong></td>
<td><strong>93</strong></td>
<td><strong>791</strong></td>
<td><strong>1003</strong></td>
</tr>
</tbody>
</table>
# College Relationship Health Program - Monthly Summary

**Relationship Definitions:**
- **Green** = Good relationship, no major problems, likes Tech Center
- **Yellow** = Minor technical or relationship issues with Tech Center
- **Orange** = Major issues putting the relationship with Tech Center at risk
- **Red** = Have given notice that they will quit a Tech Center product
- **Black** = College is non-referenceable, and a majority of key contacts are negative

### Monthly Totals:

<table>
<thead>
<tr>
<th></th>
<th>May 2018</th>
<th>June 2018</th>
<th>July 2018</th>
<th>Aug 2018</th>
</tr>
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<tbody>
<tr>
<td>SUM</td>
<td>188</td>
<td>188</td>
<td>188</td>
<td>188</td>
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### Details:

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<th>Type</th>
<th>Account Name</th>
<th>Account Owner</th>
<th>May 2018</th>
<th>June 2018</th>
<th>July 2018</th>
<th>August 2018</th>
<th>Relationship Health Reason</th>
</tr>
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<tbody>
<tr>
<td>College</td>
<td>Butte College</td>
<td>Warren Whitmore</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>Chaffey College</td>
<td>Warren Whitmore</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>City College of San Francisco</td>
<td>Warren Whitmore</td>
<td>Orange - Major Issues</td>
<td>Yellow - Needs Work</td>
<td>Yellow - Needs Work</td>
<td>Yellow - Needs Work</td>
<td>Yellow - Needs Work</td>
</tr>
<tr>
<td>College</td>
<td>Clovis Community College</td>
<td>Warren Whitmore</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>College of the Desert</td>
<td>Warren Whitmore</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>Contra Costa College</td>
<td>Warren Whitmore</td>
<td>Yellow - Needs Work</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>Copper Mountain</td>
<td>Warren Whitmore</td>
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<td>Green - Good</td>
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<td>Green - Good</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>Cuyamaca College</td>
<td>Warren Whitmore</td>
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<td>Yellow - Needs Work</td>
<td>Yellow - Needs Work</td>
<td>Yellow - Needs Work</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>De Anza College</td>
<td>Warren Whitmore</td>
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<td>Green - Good</td>
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<td>Green - Good</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>Diablo Valley College</td>
<td>Warren Whitmore</td>
<td>Yellow - Needs Work</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Yellow - Needs Work</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>Moreno Valley College</td>
<td>Warren Whitmore</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
</tr>
<tr>
<td>College</td>
<td>Mt. San Jacinto College</td>
<td>Warren Whitmore</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
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<tr>
<td>College</td>
<td>Norco College</td>
<td>Warren Whitmore</td>
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<tr>
<td>College</td>
<td>Palo Verde College</td>
<td>Warren Whitmore</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Yellow - Needs Work</td>
<td>Green - Good</td>
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</tr>
<tr>
<td>College</td>
<td>Reedley College</td>
<td>Warren Whitmore</td>
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<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
<td>Green - Good</td>
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</table>
Questions