

ND Integrated Learner Record

Phase II Project Charter

Project Client: ND Information Technology Dept (ITD)

Project Team: ND IT, PCG, RANDA, Evernym

Project Number: P0053208

CHARTER

The Project Charter lays out the charge from sponsor(s), individuals who authorized to commit organizational resources, to the project team to initiate a project, elaborate scope and design, execute, validate, and implement operations.

Program Background

North Dakota is a small dynamic state that has been able to move faster and farther than most others in implementing statewide enterprise data management for K-12 education. The ND State Longitudinal Data Systems (SLDS) has enabled the state to build strong SSO, DW, BI, and eTranscript capabilities on top of a statewide PowerSchool deployment.

As part of a FY'15 NCES SLDS grant, the North Dakota Department of Information Technology has initiated a project to leverage distributed ledger technology (DLT) (AKA Blockchain) and emerging standards for serviced-based, linked-data, open-ecosystem architecture to begin to publish lifelong, blended-learning e-transcripts into digital wallets for learners with appropriate parent/guardian controls.

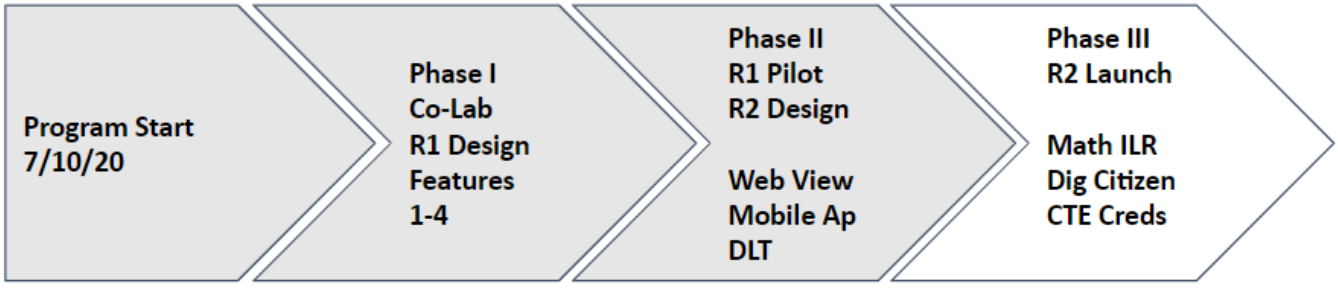
Public Consulting Group (PCG) has offered to coordinate the planning and initial discussions.

Program Goals

Be the first in the Nation to deploy and document a statewide reference model that leverages distributed ledger technology and emerging standards for serviced-based, linked-data, open-ecosystem architecture to begin to publish lifelong, blended-learning e-transcripts into digital wallets for learners with appropriate parent/guardian controls.

From SLDS, "ND will establish a 'wallet' for its participants to display and deliver their credentials and dDiploma. A pilot will be produced with students receiving and managing their credentials and dDiploma.

Program Roadmap



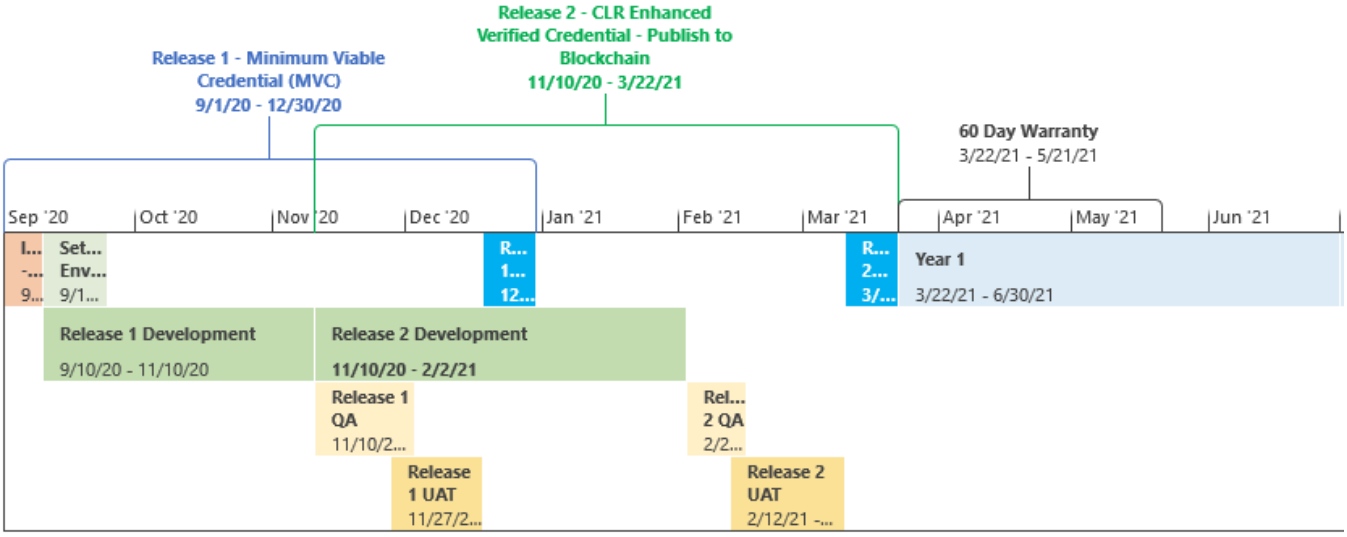
Project Scope

The scope of this work will be initially limited to K12 students. Future work will be extended to K12 educators, parents/guardians, higher ed stakeholders, and workforce stakeholders.

Objective by Priority	Key Results
1. **Identity.** Leverage existing IAM services to provision ecosystems and establish DIDs for issuing entities.	A. 176 SEA and LEA DID records with NCES ID payload will be registered with the IoE Authoritative Issuer Registries.
2. **Ontologies.** Encode relevant CASE data in a dedicated OpenSALT server mirrored to IMS CASE Network and register relevant credentials in Credential Registry.	A. An OpenSALT server will be deployed in ITD environment and mirrored to IMS CASE Network. B. All ND core four academic standards encoded and mirrored C. ND HS Course codes aligned to CASE

	standards
3. **Issue Verifiable Credentials.** Define components within the existing ND eTranscript service to be published. Define methodology for publishing including embedded hashing and end user publish interface. Profile ND eTranscript service CLR/CASE achievement assertions to a central ledger.	A. A Verified Credential Package (VC) will be created to contain ND Transcript and appropriate JSON payload. B. A User Interface is provided in the current ND eTranscript system allowing the user to publish the VC to a Wallet.
4. **Digital Wallet.** Provide a Digital Wallet app (DW App) on device and/or custodial cloud service (HTML wallet) that can subscribe to ND CLR assertions using open standards.	A. Wallet is provisioned using QR code in the ND eTranscript UI. B. Wallet app consumes and presents the (VC) payload in human readable form and allows the user to validate/verify the package issuer.
5. **Opportunity Exchange.** Engage US Chamber Job Data Exchange, PESC EdExchange, and AACRAO to determine readiness to consume ILR data.	A. Enable Zero Knowledge Proof

Project Milestones



Task Name	Duration	Start	Finish
ND Phase 2 - CLR enhanced Verified Credential - Publish to Blockchain	**1248.93 days**	**Tue 9/1/20**	**Mon 6/30/25**
Initiation - Charter approval and kickoff	**6 days**	**Tue 9/1/20**	**Wed 9/9/20**
Elaboration - Planning, Requirements, Design	**0 days**	**Wed 9/9/20**	**Wed 9/9/20**
Execution - Setup, Development, Controlling	**136.73 days**	**Tue 9/1/20**	**Mon 3/22/21**

Setup Environments	10.94 days	Thu 9/10/20	Thu 9/24/20
Release 1 Development	43.13 days	Thu 9/10/20	Tue 11/10/20
Release 2 Development	53.84 days	Tue 11/10/20	Tue 2/2/21
Controlling and Monitoring	136.73 days	Tue 9/1/20	Mon 3/22/21
Validation - Quality Assurance and User Acceptance	79.74 days	Tue 11/10/20	Wed 3/10/21
Release 1 QA	14.89 days	Tue 11/10/20	Thu 12/3/20
Release 1 UAT	14.97 days	Fri 11/27/20	Fri 12/18/20
Release 2 QA	9.5 days	Tue 2/2/21	Tue 2/16/21
Release 2 UAT	17.97 days	Fri 2/12/21	Wed 3/10/21
Implementation - Training and Deployment	60.87 days	Fri 12/18/20	Mon 3/22/21
Release 1 Training and Deployment	4.69 days	Fri 12/18/20	Wed 12/30/20
Release 2 Training and Deployment	7.86 days	Wed 3/10/21	Mon 3/22/21
Support, Maintenance, and Transition	1112.36 days	Mon 3/22/21	Mon 6/30/25
Transition to local team	0.94 days	Mon 3/22/21	Tue 3/23/21
60 Day Warranty	44 days	Mon 3/22/21	Fri 5/21/21
Support and Maintenance	1112.2 days	Mon 3/22/21	Mon 6/30/25
Year 1	71.2 days	Mon 3/22/21	Wed 6/30/21
Year 2	259 days	Wed 6/30/21	Thu 6/30/22
Year 3	261 days	Thu 6/30/22	Fri 6/30/23
Year 4	260 days	Fri 6/30/23	Fri 6/28/24
Year 5	261 days	Fri 6/28/24	Mon 6/30/25

Cost Summary

	Year 1 2020-2021	Year 2 2021-2022	Year 3 2022-2023	Year 4 2023-2024	Year 5 2024-2025
Release 1 Implementation - finish 12/30/2020	$276,211	$0	$0	$0	$0
Release 2 Implementation	$226,311	$0	$0	$0	$0

- finish 3/22/21					
Support and Maintenance - annual finish June 30th	$45,384	$102,975	$102,975	$102,975	$102,975
Sovrin Licensing - One time License and estimated usages costs	$6,615	$615	$615	$615	$615
Contract Total	**$554,520**	**$103,590**	**$103,590**	**$103,590**	**$103,590**

Assumptions

1. Systems
    a. A description of known systems is listed in the Appendix of this document
    b. ND Active Directory puts all educators, learners, and parent/guardians into OU
    c. ND wants to leverage the EdFi Change Data Capture (CDC) API in the future
    d. ND state ID access and permission to state portal (web-based wallet) will be persistent
2. ITD
    a. CIO is Shawn Riley
    b. Chief Data Officer is Dorman Bazzell
    c. SLDS Director is Tracy Korsmo
3. DPI
    a. Kirsten Baesler is the State Sup. One of her top priorities is to transition math to competency-based learning. The Walton Foundation is supporting this work
    b. Stanley Schauer, Director of Assessment. He leads the Walton Project
    c. Ann Ellefson, Director of Academic Support, <aellefson@nd.gov>
    d. Jim Upgren manages course codes
    e. Davonne Eldredge is the Assistant Director of Academic Support, She is managing the process of encoding state academic standards as CASE data. Math and ELA are done by PCG for IMS in the CASE Network. PCG will help accelerate Science, Soc Stud, Arts, and World Language.
    f. CTE is managed by North Dakota Department of Career and Technical Education. Wayde Sick, <wasick@nd.gov> is State Director
4. Learners
    a. At risk students. A population of students too often at risk is young Native American learners.

Risks

A risk log will be managed as part of this project. An initial understanding of risks includes:

Risk Statement	Likelihood	Impact	Mitigation Strategy
If the old factionalism in the DID community continues in the Internet of Education, then the resulting ecosystem may become fractured.	High	Low	Continue to operate with transparency and inclusiveness.

Project Team

Stakeholder Name	Organization	Contact email
Adam Lemmon	Convergence	adam@convergence.tech
Chami Akmeemana	Convergence	Chami@convergence.tech
Erik Zvaigzne	Convergence	Erik@convergence.tech
Drummond Reed	Evernym	drummond.reed@everynm.com
Nick Reinhart	Evernym	nick.reinhart@evernym.com
Nick Ris	Evernym	nick.ris@evernym.com
Richard Esplin	Evernym	richard.esplin@everynm.com
Andy Miller	IMS Global	amiller@imsglobal.org
Greg Van Vleet	ND	gvanvleet@nd.gov
James Sheridan	ND	james@infotekka.com
Tracy Korsmo	ND	tkorsmo@nd.gov
Chad Gumeringer	ND	cgumeringer@nd.gov
Heather Raschke	ND	hjraschke@nd.gov
Tricia Opp	ND	topp@nd.gov
Dave Ward	PCG	dward@pcgus.com
Robert Rastelli	PCG	rrastelli@pcgus.com
Tatiana Vybornova	PCG	tvybornova@pcgus.com
Joshua Marks	PCG	jmarks@pcgus.com
Greg Nadeau	PCG	gnadeau@pcgus.com
Jon Haber	PCG	Jonathan@degreeoffreedom.org
Scott Buckmaster	PCG	sbuckmaster@pcgus.com

Shane Thomas	PCG	sgthomas@pcgus.com
Vasavi Karipineni	PCG	vkaripineni@pcgus.com
Damon Tindall	Randa	damon.tindall@randasolutions.com
Keith Williams	Randa	keith.williams@randasolutions.com
Marty Reed	Randa	marty.reed@randasolutions.com

Project Management

The project will be managed in accordance with PCG Education Project Management Guidebook (based on PMI's Project Management Body of Knowledge) best practices for the knowledge areas of project management:

1. Project Administration
2. Scope Management
3. Time Management
4. Budget and Cost Management
5. Quality Management
6. Human Resources Management
7. Communications Management
8. Project Risk Management
9. Procurement Management
10. SDLC Methodology Management

Document Management. Product documents will be maintained in the project SharePoint directory.

Project Communication and Meeting Plan

Meeting Type/Name	Meeting Members	Meeting Time/Location
Weekly Team Meeting	ND IT, PCG, Evernym, RANDA	Mondays
Monthly Stakeholder Meetings	ND IT, PCG, Evernym, RANDA	TBD

Contract Management Goals

Contract Status

<Describe the status of the contract.>

Sponsor Approvals

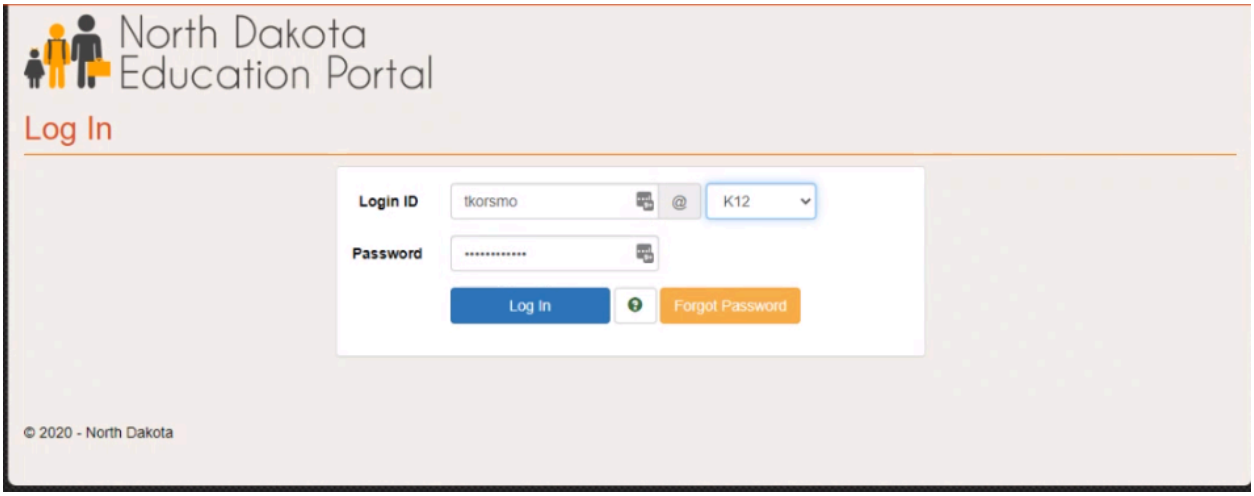
Name	Signature/Approval Date
Tracy Korsmo	
Greg Nadeau	

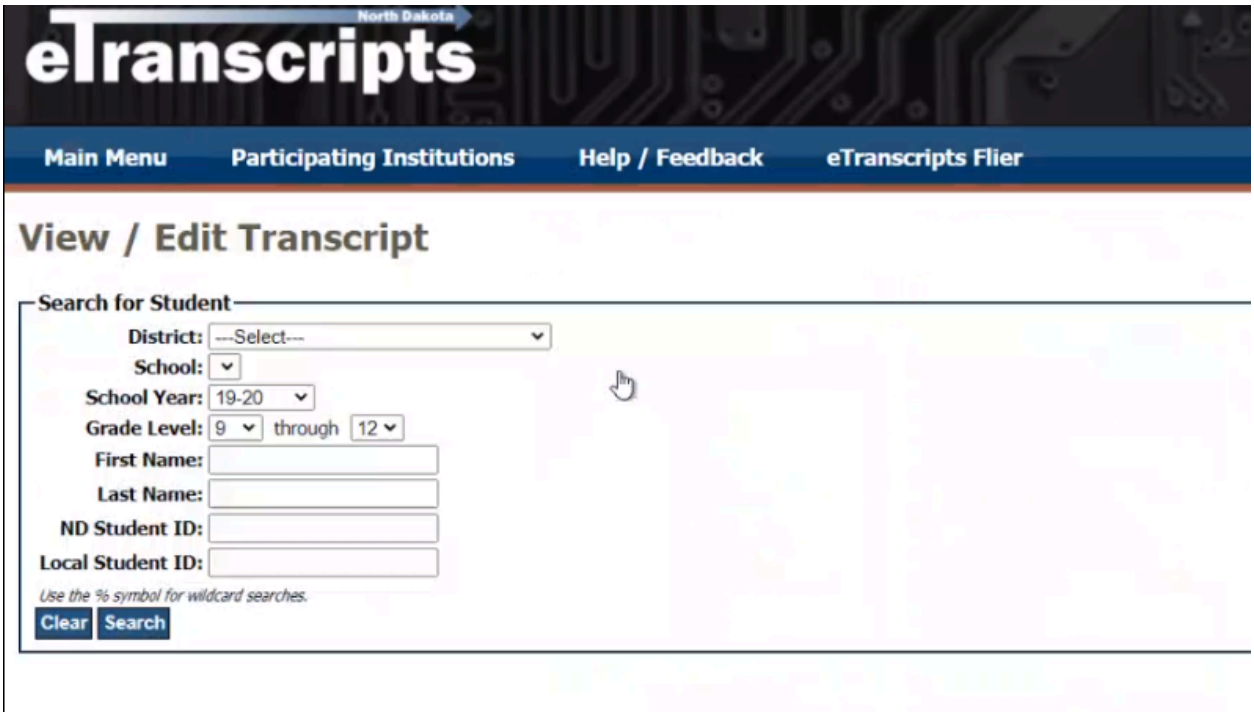
Revision History

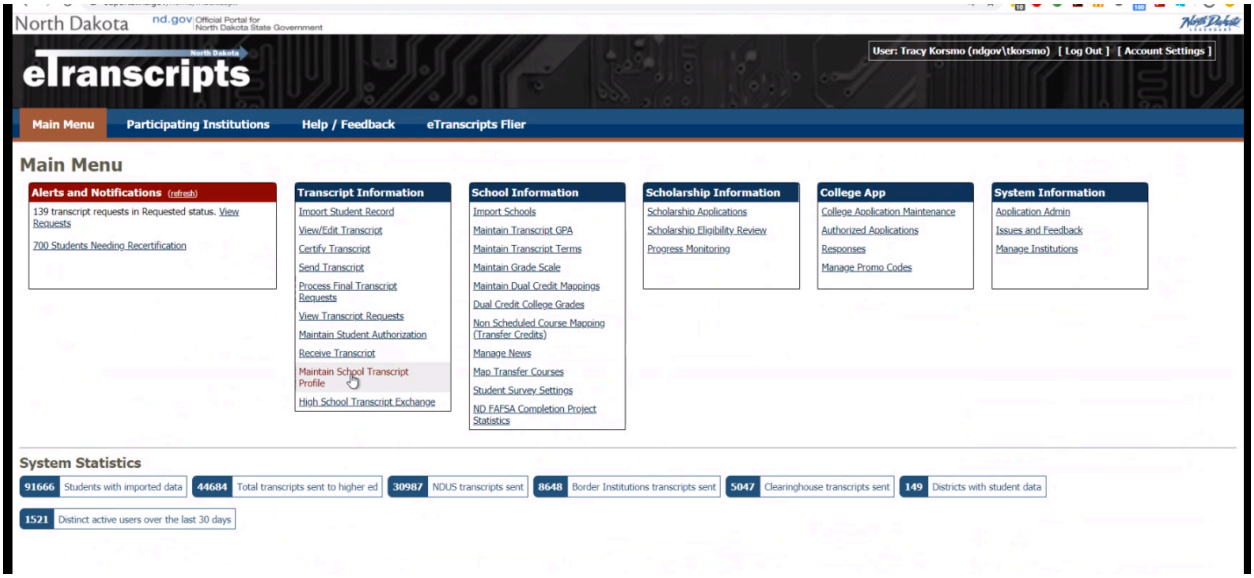
Date	Author	Purpose/Summary of Change	Version
8/31/2020	Scott Buckmaster	Added Schedule and Costs Summaries	1.1

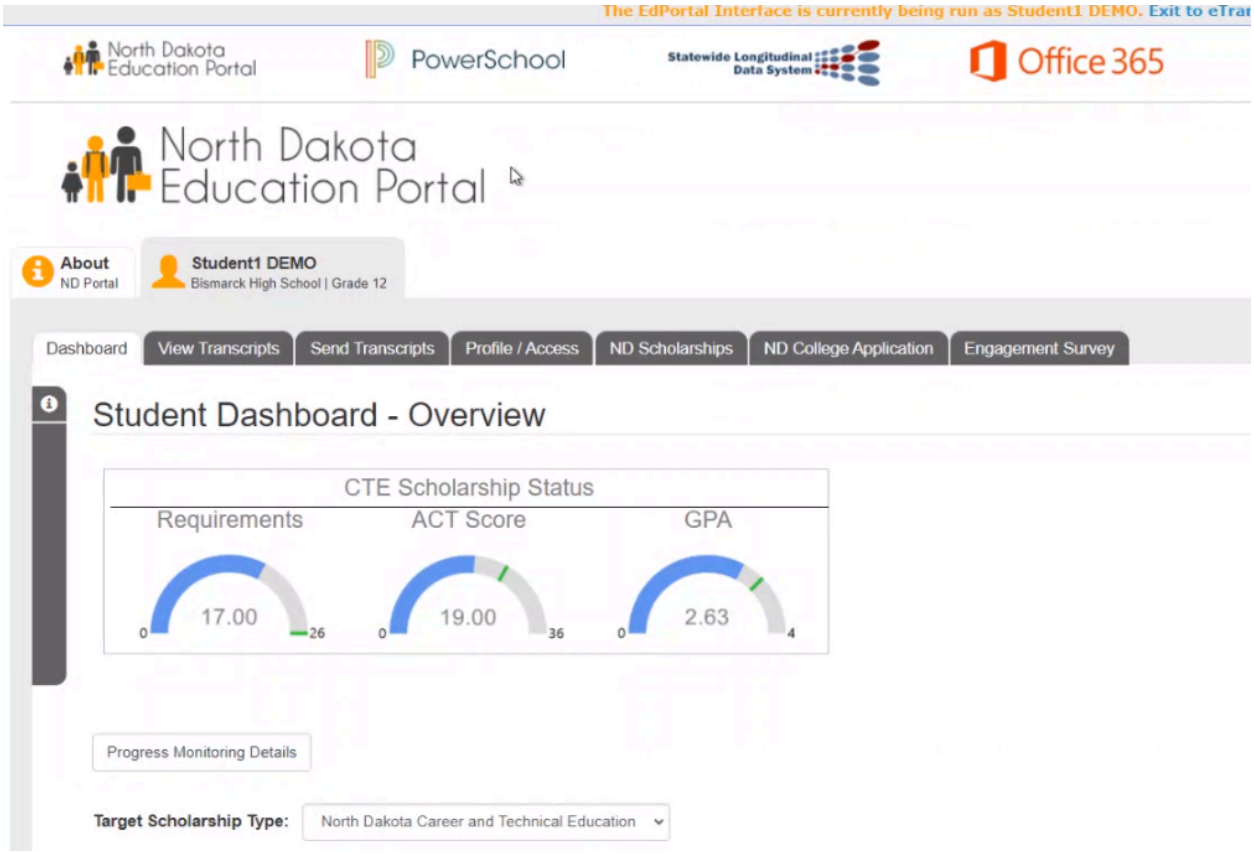
Appendix A: Systems and Screen Shots

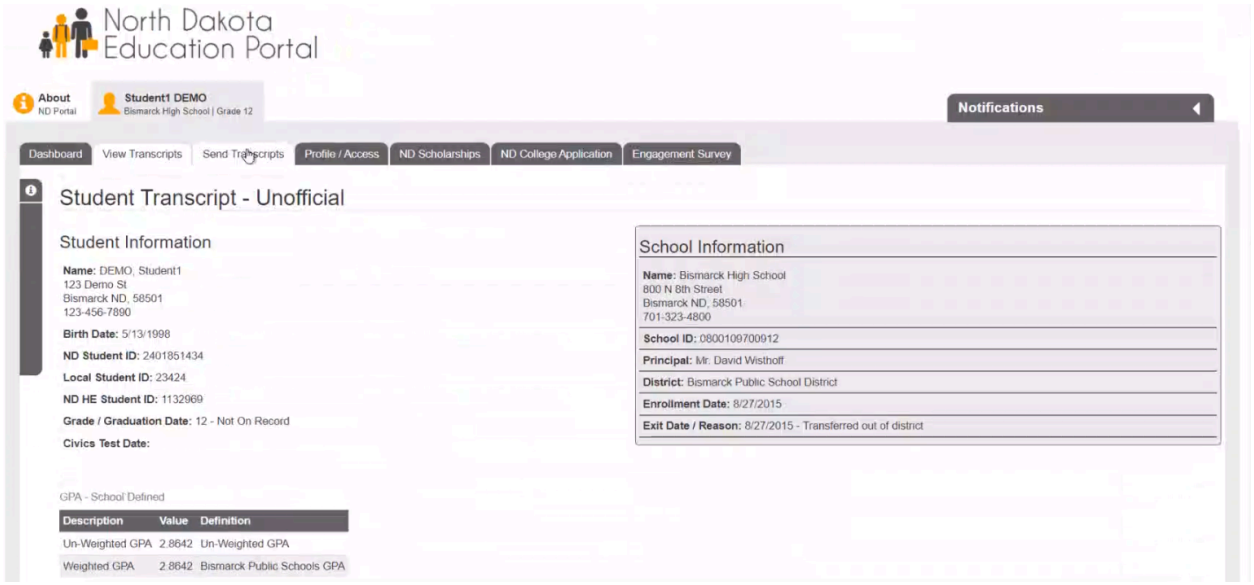
System Type	Description
Microsoft	Statewide Office 365 in state gov, K12, and higher ed
IDM and Portal	ND has built a state education data portal and SSO in .Net for students, parents, and educators. Teacher-student-section available at the state. They have a project to implement Azure B to C and hope to accomplish OAuth for student and parent access. Teacher state license # can have errors.
SIS	PowerSchool statewide as SIS with SSO to the portal.
SpEd	TiNet
eTranscript	ND has built a statewide eTranscript platform that interacts with NSC. University system is beginning to implement Parchment for receiving transcripts from out of state.
DW	ND has built a robust SLDS using .Net, DevExpress controls and dashboards, SSRS, PowerBI, and SSAS in the K12 arena. Cognos is available and used in higher education domain for some reporting, but they are moving towards to PowerBI.
PD	The SLDS built an online curriculum call 'Develop Your Data Mindset' available to in-service and pre-service teachers. It is not be included on some teaching colleges curriculum. A 3rd-party LRS was implemented to support this effort. Learning Locker
LMS	ND has support a statewide LMS for a curriculum delivered through AgBuzz
Curriculum	Generally local, but statewide commitment to curriculum for data use (Develop your data mindset) and Cyber security ed
Higher Ed	11 ND University systems share Campus Solution instance. HE has made many changes and interoperability has matured as they start to change policy and the sharing of data.

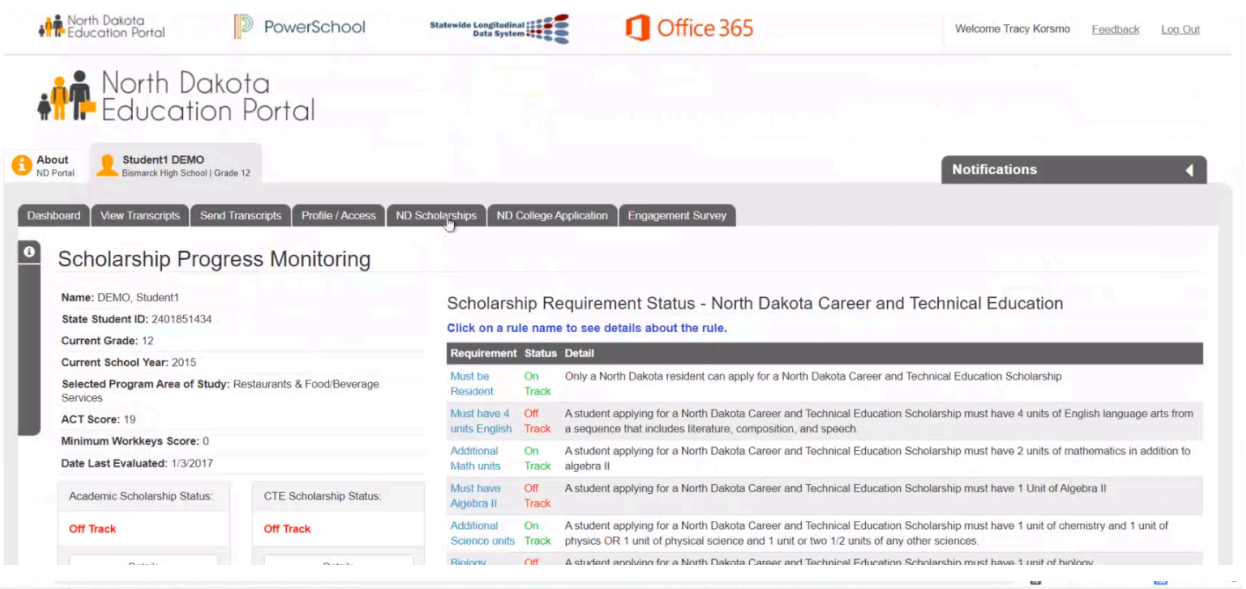

North Dakota
Education Portal
Log In
Login ID
tkorsmo
@
K12
Password
Log In
Forgot Password
© 2020 - North Dakota

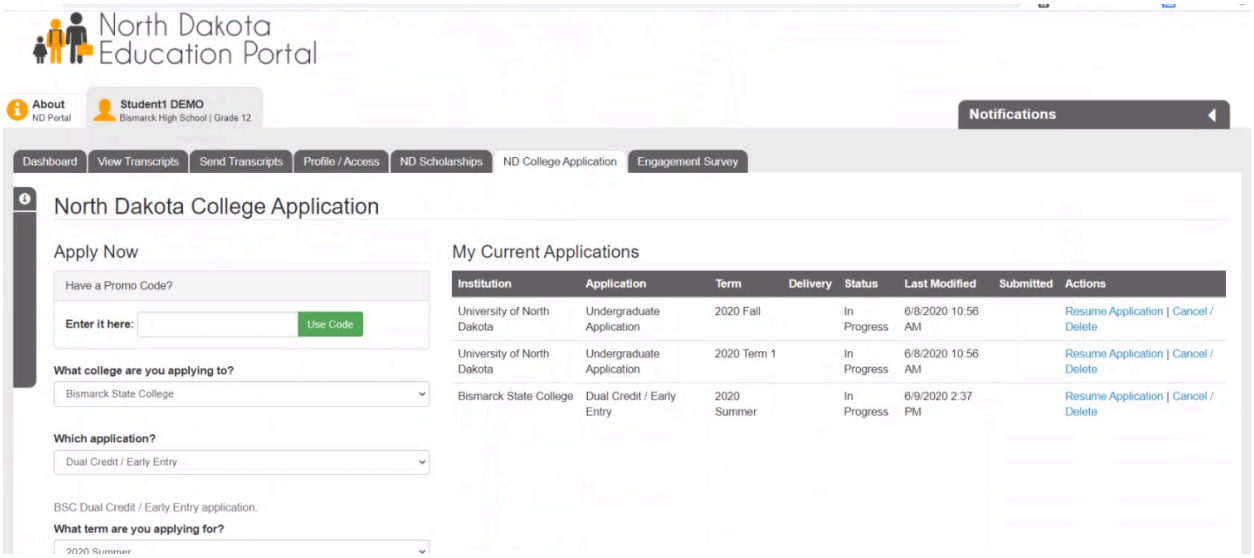

North Dakota
eTranscripts
Main Menu
Participating Institutions
Help / Feedback
eTranscripts Flier
View / Edit Transcript
Search for Student
District:
---Select---
School:
School Year:
19-20
Grade Level:
9
through
12
First Name:
Last Name:
ND Student ID:
Local Student ID:
Use the % symbol for wildcard searches.
Clear
Search

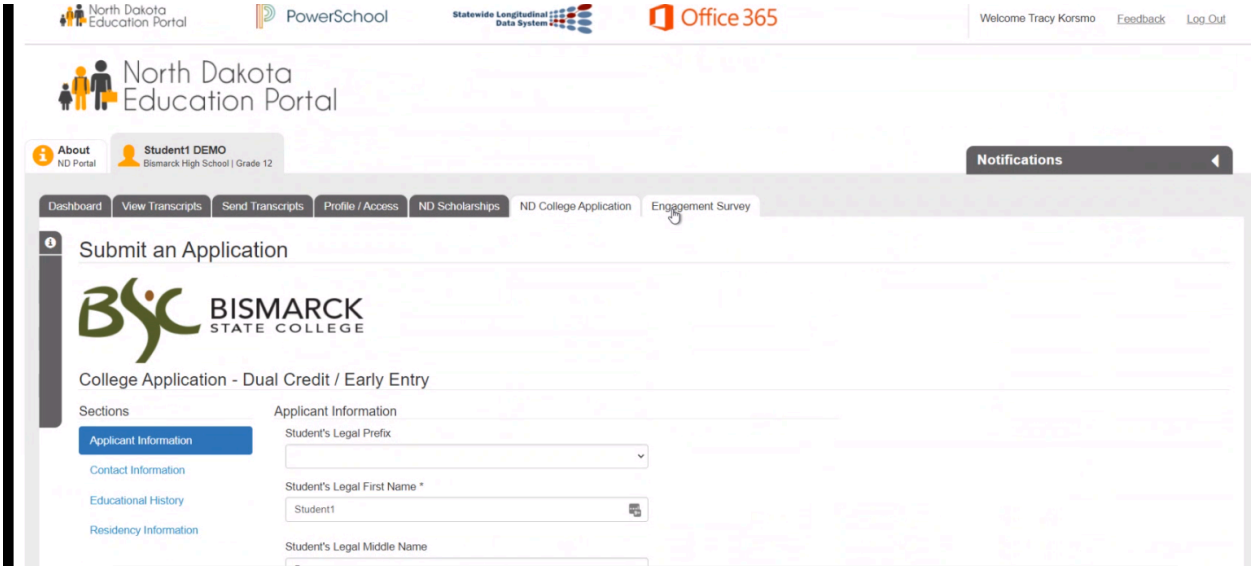

North Dakota nd.gov Official Portal for North Dakota State Government
eTranscripts
User: Tracy Korsmo (ndgov\tkorsmo) [Log Out] [Account Settings]
Main Menu
Participating Institutions
Help / Feedback
eTranscripts Flier
Main Menu
Alerts and Notifications (refresh)
139 transcript requests in Requested status. View Requests
700 Students Needing Recertification
Transcript Information
Import Student Record
View/Edit Transcript
Certify Transcript
Send Transcript
Process Final Transcript Requests
View Transcript Requests
Maintain Student Authorization
Receive Transcript
Maintain School Transcript Profile
High School Transcript Exchange
School Information
Import Schools
Maintain Transcript GPA
Maintain Transcript Terms
Maintain Grade Scale
Maintain Dual Credit Mappings
Dual Credit College Grades
Non Scheduled Course Mapping (Transfer Credits)
Manage News
Map Transfer Courses
Student Survey Settings
ND FAFSA Completion Project Statistics
Scholarship Information
Scholarship Applications
Scholarship Eligibility Review
Progress Monitoring
College App
College Application Maintenance
Authorized Applications
Responses
Manage Promo Codes
System Information
Application Admin
Issues and Feedback
Manage Institutions
System Statistics
91666 Students with imported data
44684 Total transcripts sent to higher ed
30987 NDUS transcripts sent
8648 Border Institutions transcripts sent
5047 Clearinghouse transcripts sent
149 Districts with student data
1521 Distinct active users over the last 30 days

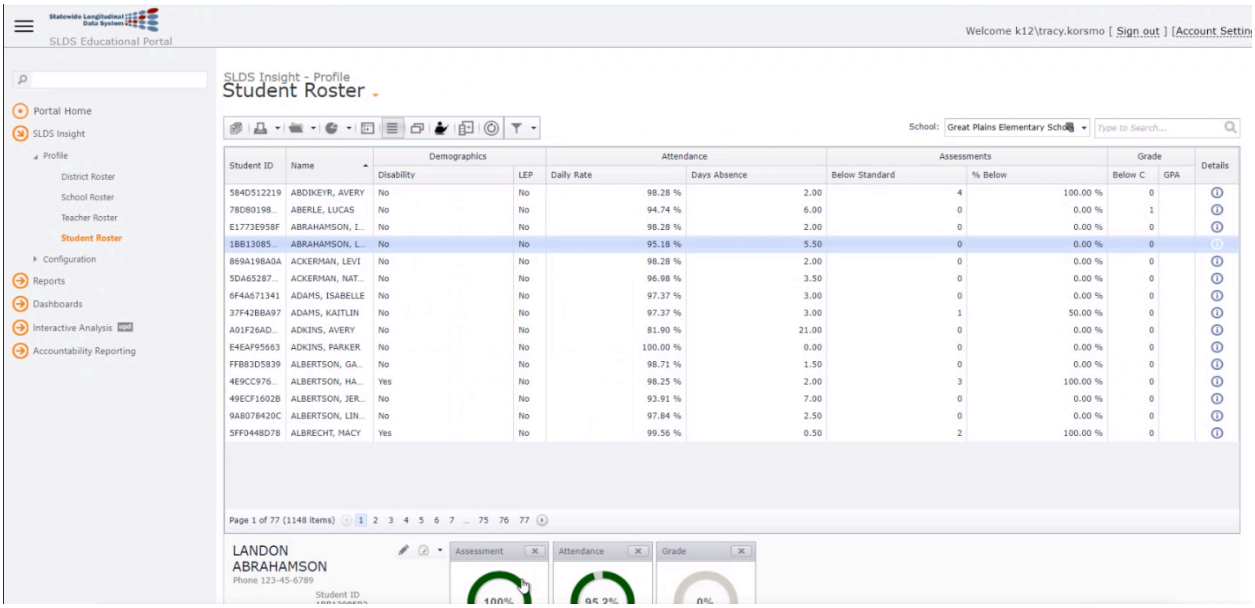

The EdPortal Interface is currently being run as Student1 DEMO. Exit to eTra
North Dakota Education Portal
PowerSchool
Statewide Longitudinal Data System
Office 365
North Dakota Education Portal
About ND Portal
Student1 DEMO
Bismarck High School | Grade 12
Dashboard
View Transcripts
Send Transcripts
Profile / Access
ND Scholarships
ND College Application
Engagement Survey
Student Dashboard - Overview
CTE Scholarship Status
Requirements
17.00
0
26
ACT Score
19.00
0
36
GPA
2.63
0
4
Progress Monitoring Details
Target Scholarship Type:
North Dakota Career and Technical Education

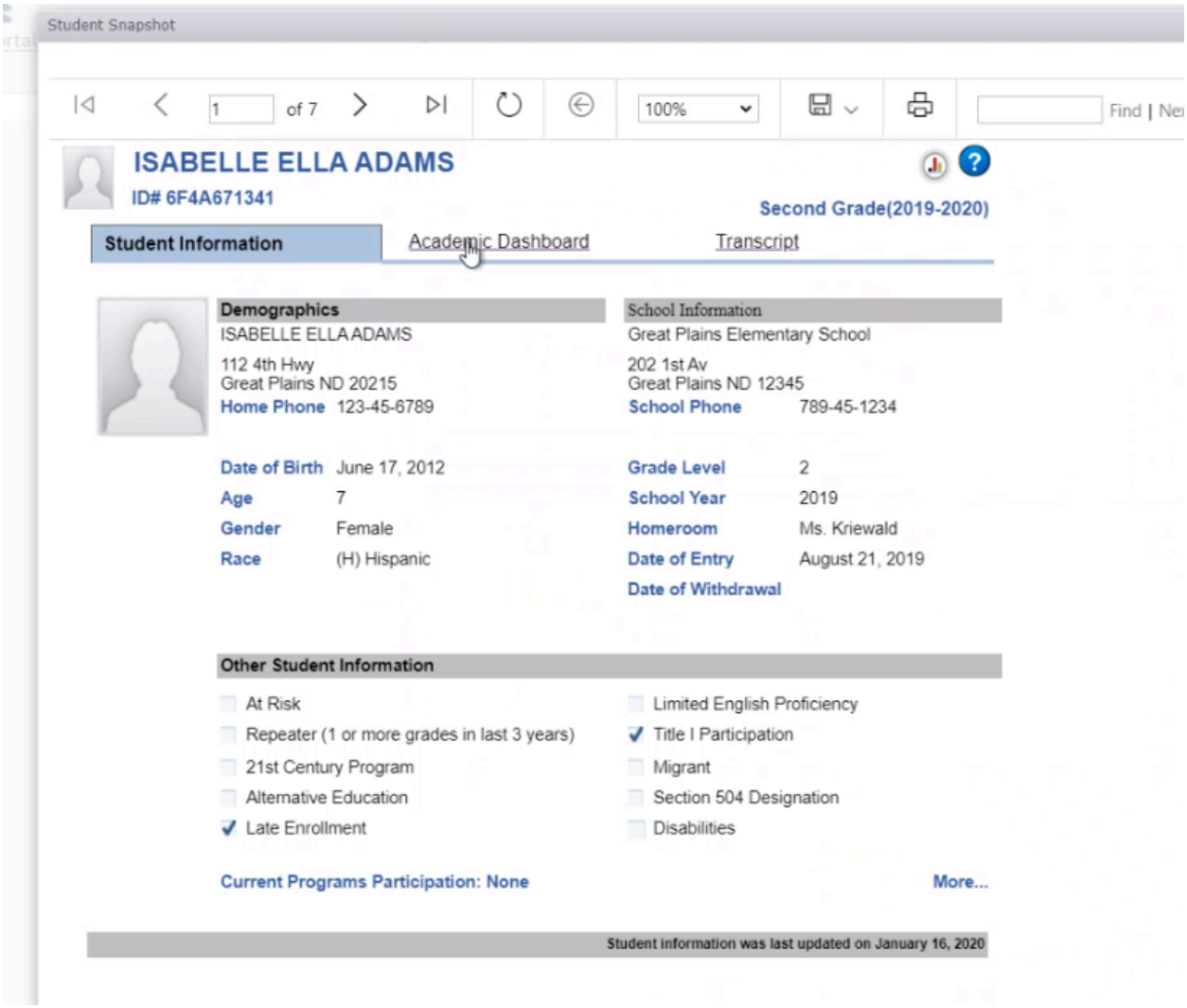

North Dakota Education Portal
About ND Portal
Student1 DEMO
Bismarck High School | Grade 12
Notifications
Dashboard
View Transcripts
Send Transcripts
Profile / Access
ND Scholarships
ND College Application
Engagement Survey
Student Transcript - Unofficial
Student Information
Name: DEMO, Student1
123 Demo St
Bismarck ND, 58501
123-456-7890
Birth Date: 5/13/1998
ND Student ID: 2401851434
Local Student ID: 23424
ND HE Student ID: 1132969
Grade / Graduation Date: 12 - Not On Record
Civics Test Date:
School Information
Name: Bismarck High School
800 N 8th Street
Bismarck ND, 58501
701-323-4800
School ID: 0800109700912
Principal: Mr. David Wisthoff
District: Bismarck Public School District
Enrollment Date: 8/27/2015
Exit Date / Reason: 8/27/2015 - Transferred out of district
GPA - School Defined
Description Value Definition
Un-Weighted GPA 2.8642 Un-Weighted GPA
Weighted GPA 2.8642 Bismarck Public Schools GPA

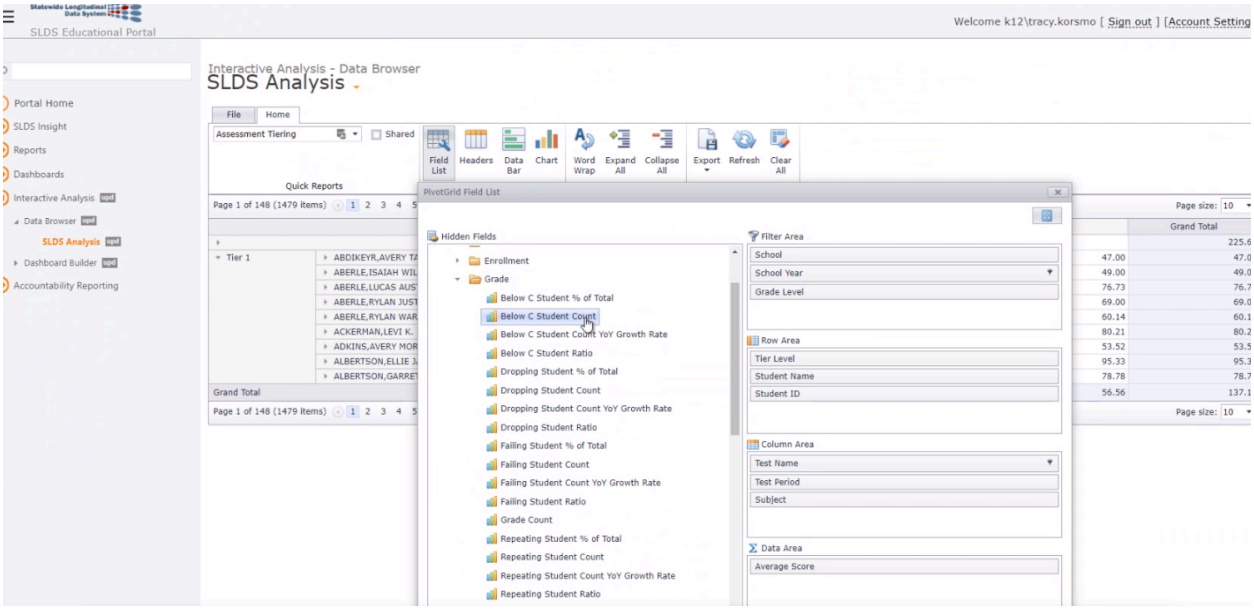

North Dakota Education Portal
PowerSchool
Statewide Longitudinal Data System
Office 365
Welcome Tracy Korsmo
Feedback
Log Out
About ND Portal
Student1 DEMO
Bismarck High School | Grade 12
Notifications
Dashboard
View Transcripts
Send Transcripts
Profile / Access
ND Scholarships
ND College Application
Engagement Survey
Scholarship Progress Monitoring
Name: DEMO, Student1
State Student ID: 2401851434
Current Grade: 12
Current School Year: 2015
Selected Program Area of Study: Restaurants & Food/Beverage Services
ACT Score: 19
Minimum Workkeys Score: 0
Date Last Evaluated: 1/3/2017
Academic Scholarship Status:
Off Track
CTE Scholarship Status:
Off Track
Scholarship Requirement Status - North Dakota Career and Technical Education
Click on a rule name to see details about the rule.
Requirement Status Detail
Must be Resident On Track Only a North Dakota resident can apply for a North Dakota Career and Technical Education Scholarship
Must have 4 units English Off Track A student applying for a North Dakota Career and Technical Education Scholarship must have 4 units of English language arts from a sequence that includes literature, composition, and speech.
Additional Math units On Track A student applying for a North Dakota Career and Technical Education Scholarship must have 2 units of mathematics in addition to algebra II
Must have Algebra II Off Track A student applying for a North Dakota Career and Technical Education Scholarship must have 1 Unit of Algebra II
Additional Science units On Track A student applying for a North Dakota Career and Technical Education Scholarship must have 1 unit of chemistry and 1 unit of physics OR 1 unit of physical science and 1 unit or two 1/2 units of any other sciences.

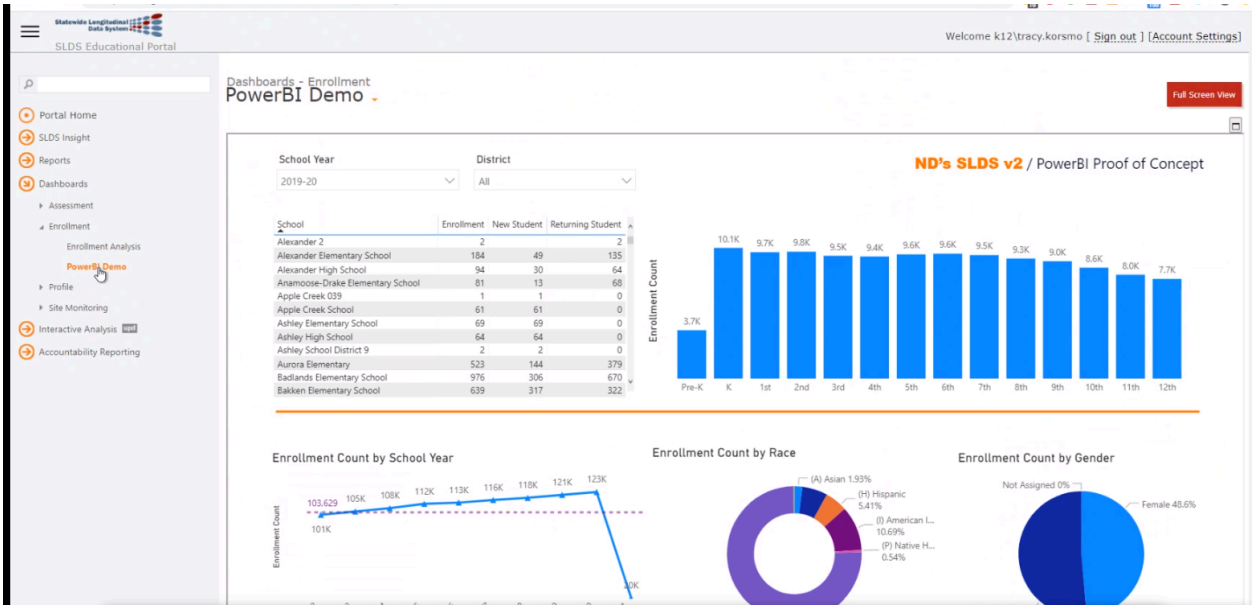

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Notifications
Dashboard
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Send Transcripts
Profile / Access
ND Scholarships
ND College Application
Engagement Survey
North Dakota College Application
Apply Now
Have a Promo Code?
Enter it here:
Use Code
What college are you applying to?
Bismarck State College
Which application?
Dual Credit / Early Entry
BSC Dual Credit / Early Entry application.
What term are you applying for?
2020 Summer
My Current Applications
Institution Application Term Delivery Status Last Modified Submitted Actions
University of North Dakota Undergraduate Application 2020 Fall In Progress 6/8/2020 10:56 AM Resume Application | Cancel / Delete
University of North Dakota Undergraduate Application 2020 Term 1 In Progress 6/8/2020 10:56 AM Resume Application | Cancel / Delete
Bismarck State College Dual Credit / Early Entry 2020 Summer In Progress 6/9/2020 2:37 PM Resume Application | Cancel / Delete

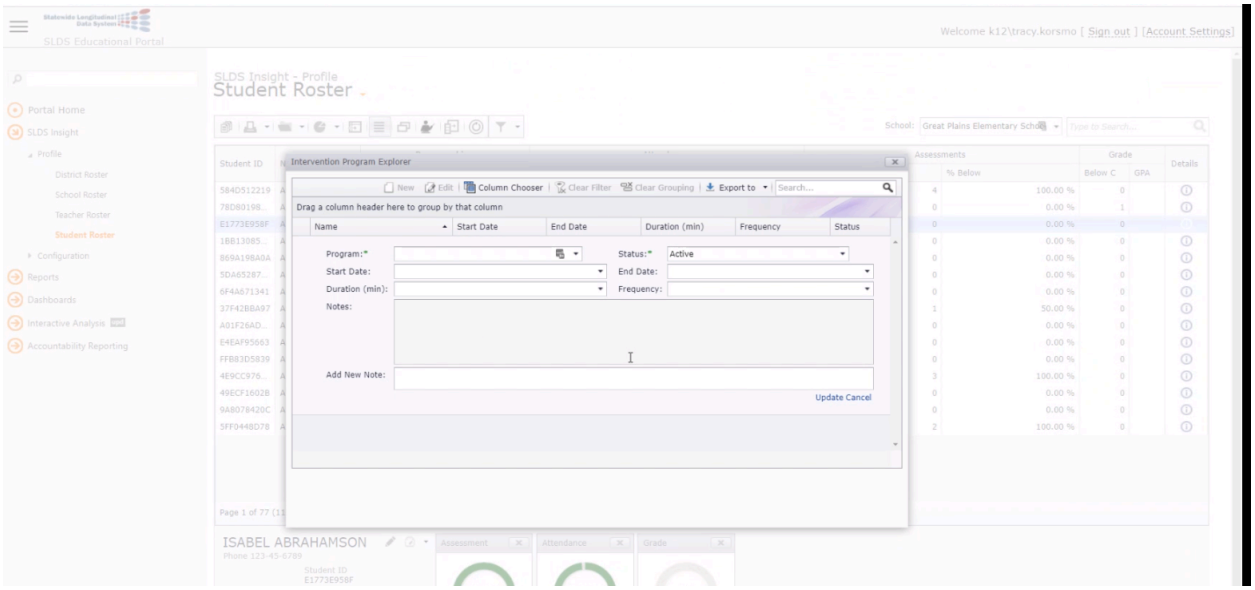

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Profile / Access
ND Scholarships
ND College Application
Engagement Survey
Submit an Application
BISMARCK STATE COLLEGE
College Application - Dual Credit / Early Entry
Sections
Applicant Information
Contact Information
Educational History
Residency Information
Applicant Information
Student's Legal Prefix
Student's Legal First Name *
Student1
Student's Legal Middle Name


SLDS Educational Portal
Welcome k12\tracy.korsmo [Sign out] [Account Settin
Portal Home
SLDS Insight
Profile
District Roster
School Roster
Teacher Roster
Student Roster
Configuration
Reports
Dashboards
Interactive Analysis
Accountability Reporting
SLDS Insight - Profile
Student Roster
School: Great Plains Elementary Scho
Type to Search...
Student ID
Name
Demographics
Disability
LEP
Attendance
Daily Rate
Days Absence
Assessments
Below Standard
% Below
Grade
Below C
GPA
Details
584D512219 ABDIKEYR, AVERY No No 98.28 % 2.00 4 100.00 % 0
78DB0198... ABERLE, LUCAS No No 94.74 % 6.00 0 0.00 % 1
E1773E958F ABRAHAMSON, I... No No 98.28 % 2.00 0 0.00 % 0
1BB13085... ABRAHAMSON, L... No No 95.18 % 5.50 0 0.00 % 0
869A198A0A ACKERMAN, LEVI No No 98.28 % 2.00 0 0.00 % 0
5DA65287... ACKERMAN, NAT... No No 96.98 % 3.50 0 0.00 % 0
6F4A671341 ADAMS, ISABELLE No No 97.37 % 3.00 0 0.00 % 0
37F42BBA97 ADAMS, KAITLIN No No 97.37 % 3.00 1 50.00 % 0
A01F26AD... ADKINS, AVERY No No 81.90 % 21.00 0 0.00 % 0
E4EAF95663 ADKINS, PARKER No No 100.00 % 0.00 0 0.00 % 0
FFB83D5839 ALBERTSON, GA... No No 98.71 % 1.50 0 0.00 % 0
4E9CC976... ALBERTSON, HA... Yes No 98.25 % 2.00 3 100.00 % 0
49ECF1602B ALBERTSON, JER... No No 93.91 % 7.00 0 0.00 % 0
9A8078420C ALBERTSON, LIN... No No 97.84 % 2.50 0 0.00 % 0
5FF0448D78 ALBRECHT, MACY Yes No 99.56 % 0.50 2 100.00 % 0
Page 1 of 77 (1148 items) 1 2 3 4 5 6 7 ... 75 76 77
LANDON ABRAHAMSON
Phone 123-45-6789
Student ID
Assessment
Attendance
Grade
100%
95.2%
0%


Student Snapshot
1
of 7
100%
Find | Ne
ISABELLE ELLA ADAMS
ID# 6F4A671341
Second Grade(2019-2020)
Student Information
Academic Dashboard
Transcript
Demographics
ISABELLE ELLA ADAMS
112 4th Hwy
Great Plains ND 20215
Home Phone 123-45-6789
School Information
Great Plains Elementary School
202 1st Av
Great Plains ND 12345
School Phone 789-45-1234
Date of Birth June 17, 2012
Age 7
Gender Female
Race (H) Hispanic
Grade Level 2
School Year 2019
Homeroom Ms. Kriewald
Date of Entry August 21, 2019
Date of Withdrawal
Other Student Information
At Risk
Repeater (1 or more grades in last 3 years)
21st Century Program
Alternative Education
Late Enrollment
Limited English Proficiency
Title I Participation
Migrant
Section 504 Designation
Disabilities
Current Programs Participation: None
More...
Student information was last updated on January 16, 2020

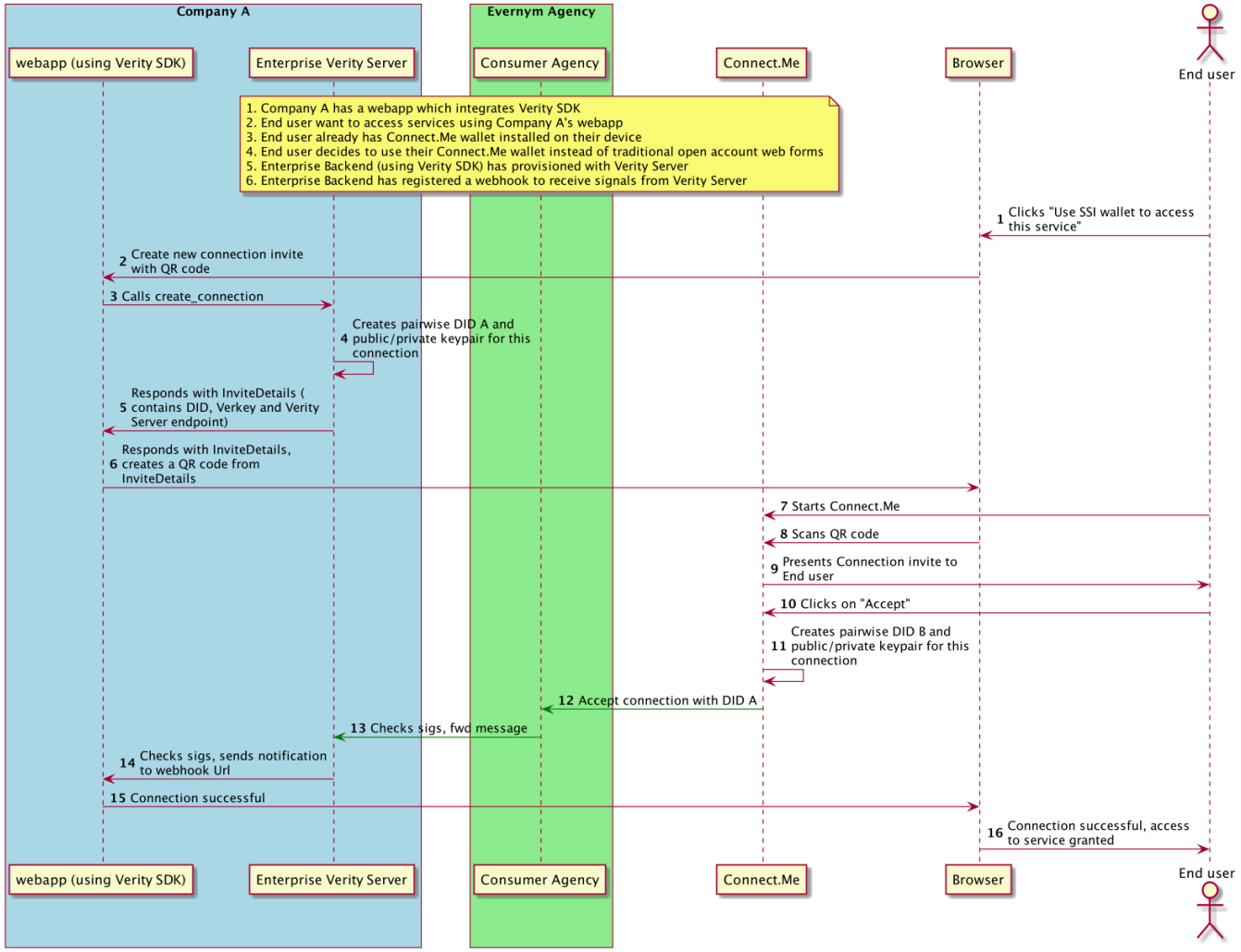

SLDS Educational Portal
Welcome k12\tracy.korsmo [Sign out] [Account Setting
Interactive Analysis - Data Browser
SLDS Analysis
Portal Home
SLDS Insight
Reports
Dashboards
Interactive Analysis
Data Browser
SLDS Analysis
Dashboard Builder
Accountability Reporting
File
Home
Field List
Headers
Data Bar
Chart
Word Wrap
Expand All
Collapse All
Export
Refresh
Clear All
PivotGrid Field List
Hidden Fields
Enrollment
Grade
Below C Student % of Total
Below C Student Count
Below C Student Count YoY Growth Rate
Below C Student Ratio
Dropping Student % of Total
Dropping Student Count
Dropping Student Count YoY Growth Rate
Dropping Student Ratio
Failing Student % of Total
Failing Student Count
Failing Student Count YoY Growth Rate
Failing Student Ratio
Grade Count
Repeating Student % of Total
Repeating Student Count
Repeating Student Count YoY Growth Rate
Repeating Student Ratio
Filter Area
School
School Year
Grade Level
Row Area
Tier Level
Student Name
Student ID
Column Area
Test Name
Test Period
Subject
Data Area
Average Score


SLDS Educational Portal
Welcome k12\tracy.korsmo [Sign out] [Account Settings]
Dashboards - Enrollment
PowerBI Demo
Full Screen View
Portal Home
SLDS Insight
Reports
Dashboards
Assessment
Enrollment
Enrollment Analysis
PowerBI Demo
Profile
Site Monitoring
Interactive Analysis
Accountability Reporting
School Year
2019-20
District
All
ND's SLDS v2 / PowerBI Proof of Concept
School
Enrollment
New Student
Returning Student
Alexander 2 2 2
Alexander Elementary School 184 49 135
Alexander High School 94 30 64
Anamoose-Drake Elementary School 81 13 68
Apple Creek 039 1 1 0
Apple Creek School 61 61 0
Ashley Elementary School 69 69 0
Ashley High School 64 64 0
Ashley School District 9 2 2 0
Aurora Elementary 523 144 379
Badlands Elementary School 976 306 670
Bakken Elementary School 639 317 322
Enrollment Count
3.7K
10.1K
9.7K
9.8K
9.5K
9.4K
9.6K
9.6K
9.5K
9.3K
9.0K
8.6K
8.0K
7.7K
Pre-K
K
1st
2nd
3rd
4th
5th
6th
7th
8th
9th
10th
11th
12th
Enrollment Count by School Year
103,629
105K
108K
112K
113K
116K
118K
121K
123K
101K
Enrollment Count by Race
(A) Asian 1.93%
(H) Hispanic 5.41%
(I) American I... 10.69%
(P) Native H... 0.54%
Enrollment Count by Gender
Not Assigned 0%
Female 48.6%

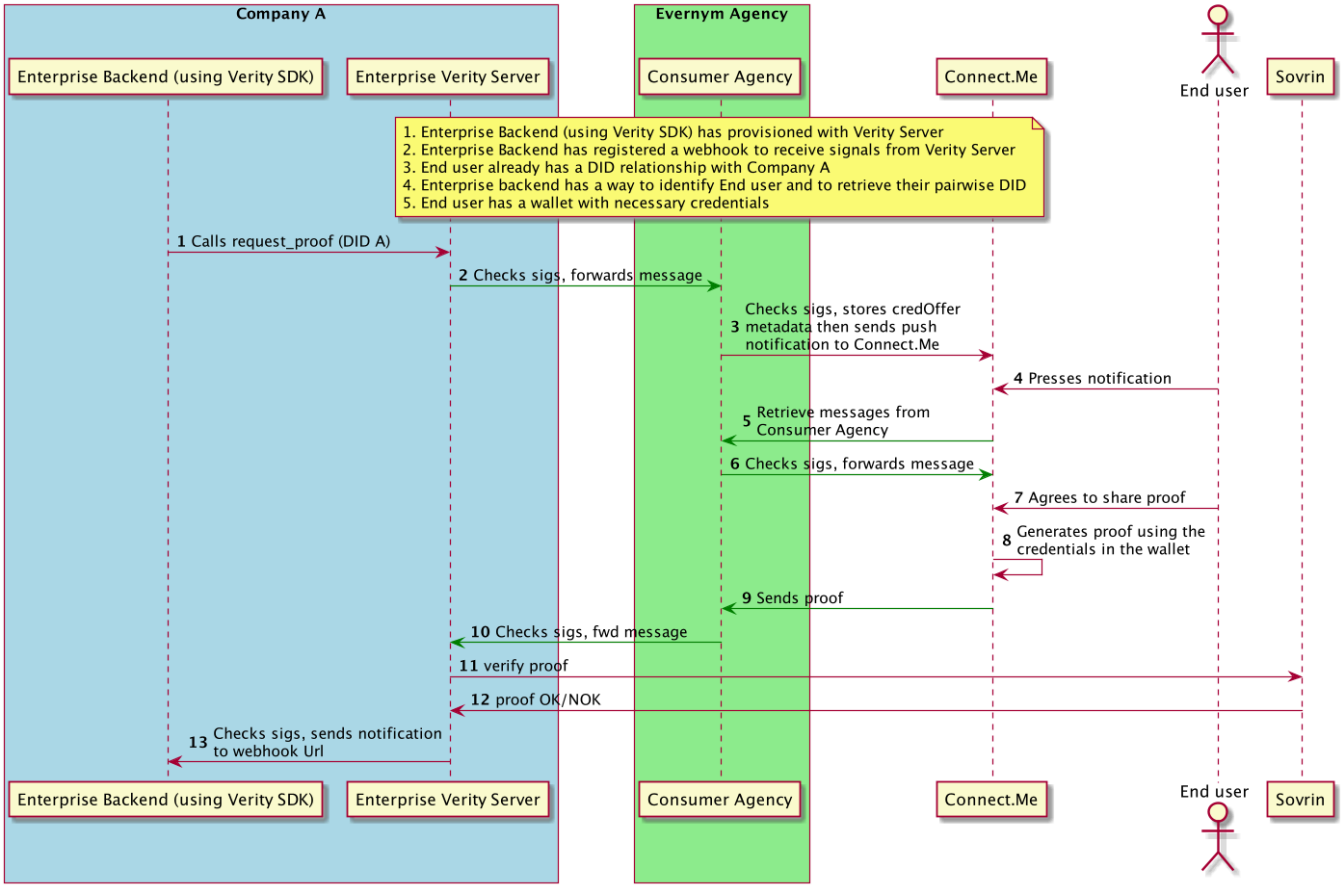

SLDS Educational Portal
Welcome k12\tracy.korsmo [Sign out] [Account Settings]
SLDS Insight - Profile
Student Roster
Portal Home
SLDS Insight
Profile
District Roster
School Roster
Teacher Roster
Student Roster
Configuration
Reports
Dashboards
Interactive Analysis
Accountability Reporting
Intervention Program Explorer
New
Edit
Column Chooser
Clear Filter
Clear Grouping
Export to
Search...
Drag a column header here to group by that column
Name
Start Date
End Date
Duration (min)
Frequency
Status
Program:*
Status:*
Active
Start Date:
End Date:
Duration (min):
Frequency:
Notes:
Add New Note:
Update Cancel
ISABEL ABRAHAMSON

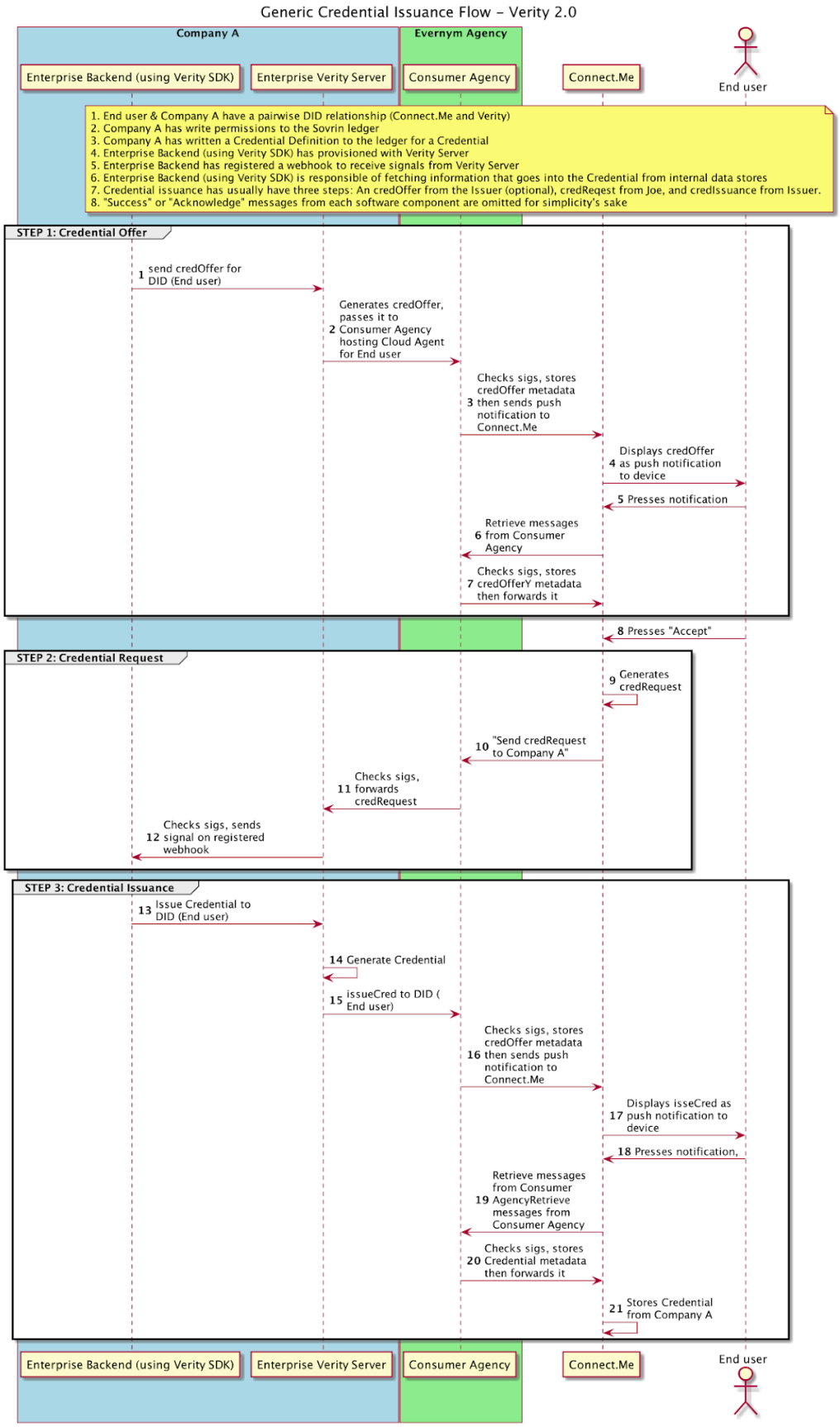
Appendix B: Design Schemas

Generic connecting protocol (DID exchange) – Verity 2.0



Generic Proof presentation protocol – Verity 2.0




Generic Credential Issuance Flow – Verity 2.0
Company A
Evernym Agency
Enterprise Backend (using Verity SDK)
Enterprise Verity Server
Consumer Agency
Connect.Me
End user
1. End user & Company A have a pairwise DID relationship (Connect.Me and Verity)
2. Company A has write permissions to the Sovrin ledger
3. Company A has written a Credential Definition to the ledger for a Credential
4. Enterprise Backend (using Verity SDK) has provisioned with Verity Server
5. Enterprise Backend has registered a webhook to receive signals from Verity Server
6. Enterprise Backend (using Verity SDK) is responsible of fetching information that goes into the Credential from internal data stores
7. Credential issuance has usually have three steps: An credOffer from the Issuer (optional), credReqest from Joe, and credIssuance from Issuer.
8. "Success" or "Acknowledge" messages from each software component are omitted for simplicity's sake
STEP 1: Credential Offer
1 send credOffer for DID (End user)
Generates credOffer, passes it to 2 Consumer Agency hosting Cloud Agent for End user
Checks sigs, stores credOffer metadata 3 then sends push notification to Connect.Me
Displays credOffer 4 as push notification to device
5 Presses notification
Retrieve messages 6 from Consumer Agency
Checks sigs, stores 7 credOfferY metadata then forwards it
8 Presses "Accept"
STEP 2: Credential Request
9 Generates credRequest
10 "Send credRequest to Company A"
Checks sigs, 11 forwards credRequest
Checks sigs, sends 12 signal on registered webhook
STEP 3: Credential Issuance
13 Issue Credential to DID (End user)
14 Generate Credential
15 issueCred to DID (End user)
Checks sigs, stores credOffer metadata 16 then sends push notification to Connect.Me
Displays isseCred as 17 push notification to device
18 Presses notification,
Retrieve messages from Consumer 19 AgencyRetrieve messages from Consumer Agency
Checks sigs, stores 20 Credential metadata then forwards it
21 Stores Credential from Company A
Enterprise Backend (using Verity SDK)
Enterprise Verity Server
Consumer Agency
Connect.Me
End user