

How to Download, Install, and Run Consent2Share

SAMHSA's Open Source Data Segmentation and Consent Management Application

April 25, 2018

1:00 p.m. – 2:30 p.m.



This PDF version of the webinar “How to Download, Install, and Run Consent2Share” includes the “Notes Pages.”

The “Notes Pages” includes what the webinar speakers said and their detailed instructions and suggestions for downloading, installing, and running Consent2Share.

Contents

- Section One: Introduction to Consent2Share
- Section Two: Overview of Consent2Share Architecture
- Section Three: Technical and Organizational Considerations
- Section Four: Obtaining Consent2Share



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This presentation will cover four key areas:

- An introduction to Consent2Share
- An overview of the Consent2Share Architecture
- Technical and Organizational Considerations
- And, how to obtain Consent2Share

Introduction to Consent2Share



Ken Salyards

Information Management Specialist
Substance Abuse and Mental Health Services
Health Information Team

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- Ken Salyards is an Information Management Specialist at the Center for Substance Abuse Treatment – or CSAT.
- He is also a member of the Substance Abuse and Mental Health Services Administration Health IT Team, which led the development of Consent2Share.
- Ken will lead Section One: An Introduction to Consent2Share.

Section One:
Introduction to
Consent2Share



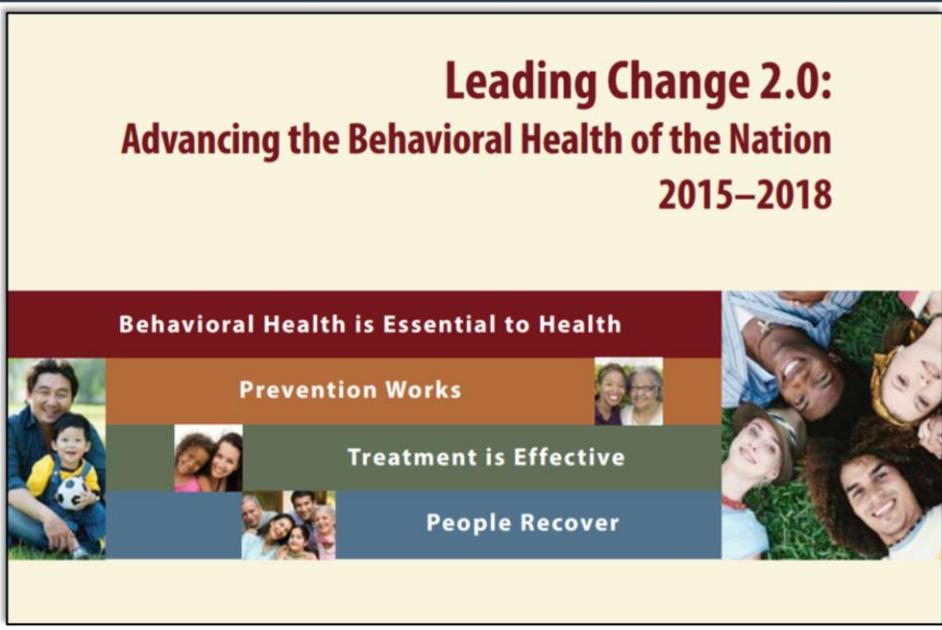
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This first section of the webinar provides a brief introduction to:

- Consent2Share
- Data Segmentation
- Consent Management, and
- 42 CFR Part 2

Leading Change 2.0:
Advancing the Behavioral Health of the Nation
2015–2018



Behavioral Health is Essential to Health

Prevention Works

Treatment is Effective

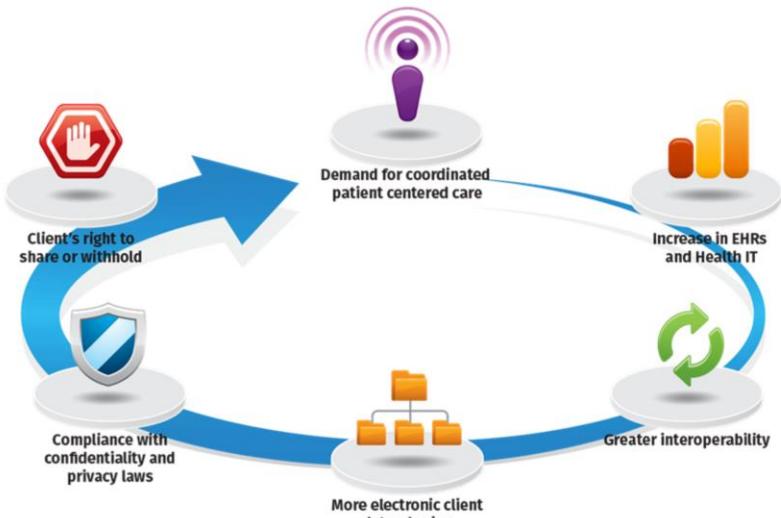
People Recover

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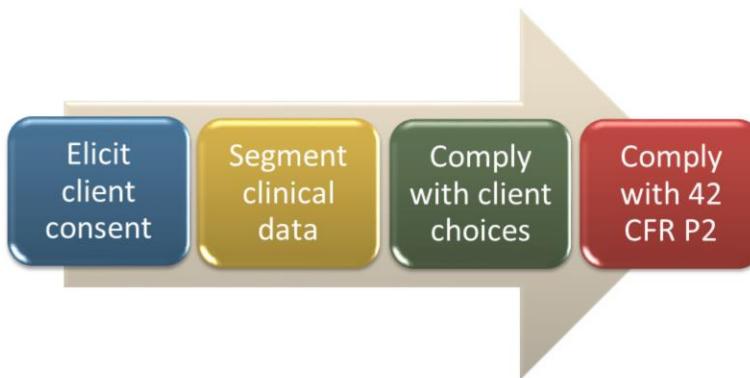
- SAMHSA places a great deal of emphasis on behavioral health Information Technology.
- Much of this work has been led by the SAMHSA Health IT Team.
- The Health IT Team's goals are to advance the use of health IT tools to promote integrated behavioral health care and its potential to transform the health care system.
- This is important to SAMHSA because we recognize the importance of integrating behavioral health across the entire care continuum.

The Current Health Care Environment



- There have been many changes in payment and delivery models in healthcare.
- There has been a demand for better coordinated and patient-centered care.
- There has been a dramatic rise in the use of electronic health records.
- This is enabling greater health record portability through provider-to-provider exchange and through HIE organizations.
- The healthcare industry is moving toward greater interoperability and pervasive health information exchange.
- At the same time, healthcare organizations must ensure that client data is shared in compliance with federal and state confidentiality laws.
- Importantly, clients have the right to control which aspects of their information is shared (or withheld)—and with whom.

Need for Data Segmentation & Consent Management



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- There is an intense effort to better integrate mental health, substance abuse, and primary care treatment.
- Federal and state laws about sensitive health information are driving the need for:
 - ✓ Data segmentation,
 - ✓ Capturing client consent,
 - ✓ And enforcing client preferences.
- Thus, there is a need for behavioral health care organizations and systems to develop online systems that:
 - ✓ Elicit client consent
 - ✓ Segment data
 - ✓ Comply with client preferences, and
 - ✓ Comply with confidentiality and privacy laws.

Solution: Consent2Share

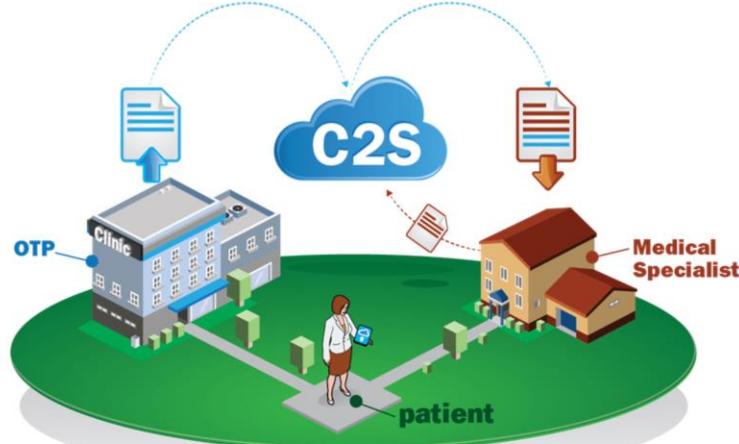


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- To address CFR Part 2 requirements, and leveraging segmentation and consent standards, SAMHSA developed Consent2Share.
- Consent 2Share is as an open-source application for consent management and data segmentation.
- It integrates with electronic health records and health information exchange systems via interoperability standards.
- Clients can use Consent2Share to control their preferences about which data to share and not share—and with whom the information is shared.

Client Controls Information Exchange



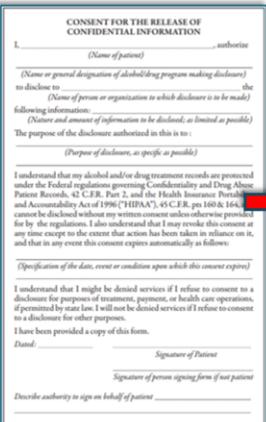
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Using Consent2Share, clients can create consents to share their information in several ways.

- Clients can select:
 - ✓ Providers,
 - ✓ sensitive information categories,
 - ✓ medical information categories,
 - ✓ clinical document types,
 - ✓ specific medical information,
 - ✓ and the purpose for the use of the information.
- Consent2Share enables electronic implementation of sensitive health information disclosure policies by applying the information-sharing rules needed to constrain the disclosure of sensitive data according to the preferences of the patient.

Consent2Share: Patient Provides Electronic Consent



CONSENT FOR THE RELEASE OF CONFIDENTIAL INFORMATION

I, _____, authorize _____ to disclose to _____ the following information:

(Nature and amount of information to be disclosed; as limited as possible)

The purpose of the disclosure authorized is this is :

(Purpose of disclosure, as specific as possible)

I understand that my alcohol and/or drug treatment records are protected under the Federal regulations governing Confidentiality and Drug Abuse Patient Records, 42 C.F.R. Part 2, and the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), 45 C.F.R. parts 160 & 164. I cannot be disclosed without my written permission, except as otherwise permitted by the regulations. I also understand that I may revoke this consent at any time except to the extent that action has been taken in reliance on it, and that in any event this consent expires automatically as follows:

(Specification of the date, event or condition upon which this consent expires)

I understand that I might be denied services if I refuse to consent to disclosures for purposes of treatment, payment, or health care operations, if permitted by state law. I will not be denied services if I refuse to consent to a disclosure for other purposes.

I have been provided a copy of this form.

Dated: _____

Signature of Patient _____

Signature of person signing form on behalf of patient _____

Consent to Share My Medical Information

Consent Reference Number: RwBL42pZuT
Patient Name: Sally Share
Patient DOB: Sep 9, 1940

AUTHORIZATION TO DISCLOSE

Authorizes:
C2S-Ay Care Team Members

To disclose to:
C2S-Ay Care Team Members

HEALTH INFORMATION TO BE DISCLOSED

To SHARE the following medical information:

- HIV/AIDS information
- Substance use information
- Mental health information
- Sexuality and reproductive health information

To SHARE for the following purpose(s):
Treatment

CONSENT TERMS

Sally Share, understand that my records are protected under the federal regulations governing Confidentiality of Alcohol and Drug Abuse Patient Records, 42 CFR part 2, and cannot be disclosed without my written permission or as otherwise permitted by 42 CFR part 2. I also understand that I may revoke this consent at any time except to the extent that action has been taken in reliance on it, and that any event this consent expires automatically as follows:

Effective Date: Dec 12, 2017
Expiration Date: Dec 12, 2018

I, Sally Share, hereby accept, and understand the terms of this consent.

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Using Consent2Share, patients can provide an electronic consent by using the User Interface and the application's Consent Component.
This replaces the need for patients to sign a paper consent.

Architecture, Considerations, and Obtaining



Stan Peabody
Software
Tester
FEI Systems



Burçak Uluğ
Sr. Application Developer
FEI Systems

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- That is an overview of Consent2Share and why we developed it.
- Now, I will hand the presentation over to Stan Peabody and Burcak Ulug.
- Stan is a Software Tester at FEI Systems and Burcak is a Senior Application Developer at FEI Systems.
- FEI Systems is the contractor who built Consent2Share for SAMHSA.

Section Two: Overview of Consent2Share Architecture



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- In this section, we will provide an overview of the Consent2Share architecture.

Technical Benefits of Consent2Share

- Open-source web application
- Web-based user interface for consent management and data segmentation
- Enables data redaction, data segmentation, and patient-driven consent preferences



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- Consent2Share is an open source web application
- It has a web-based user interface for consent management and data segmentation
- It enables data segmentation and patient-driven consent preferences.

Technical Benefits of Consent2Share, Continued

- Includes value set management
- Integrates with existing EHR and HIE systems
- Uses interoperability standards
- Complies with DS4P, Section 508, HL7, 42 CFR Part 2, HIPAA
- Supports behavioral health data integration with Fast Healthcare Interoperability Resources (FHIR) Servers

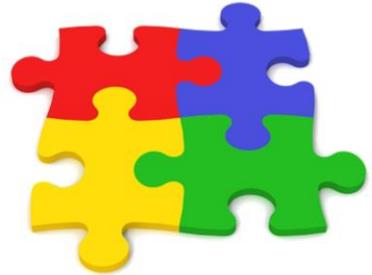


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- Consent2Share includes value set management to manage value sets and map them to appropriate sensitivity categories and privacy settings.
- It is designed to integrate with existing EHR and HIE systems.
- It uses interoperability standards, and is compliant with other current standards and laws.
- Consent2Share now supports behavioral health data integration with FHIR Servers

Technical Benefits: A Component Approach

- Consent2Share consists of discrete components
- One component is separate from another component
- Modular approach allows greater customization



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- Consent2Share was developed using discrete components
- For example, the Patient Consent component is a separate component from the data segmentation service
- This allows for greater customization

Two Consent2Share Editions

Consent2Share HIE Edition	Consent2Share Manual Edition
<ul style="list-style-type: none">Integrates with HIE systems	<ul style="list-style-type: none">Does not require HIEWorks with low-tech workflow (phone/FAX)Providers manually upload/download recordsNominal impact to workflow and integration
<ul style="list-style-type: none">Two EditionsSame code baseMeets providers where they areAligns with providers' resources and capabilities	



There are two Editions of Consent2Share: an HIE and a Manual Edition.

The HIE Edition integrates with existing HIE systems.

The Manual Edition does not require an HIE. It can work with low-tech workflows, such as phones and faxes.

Importantly, they use the same code base.

Technical Overview: Technology Stack

- Angular JS
- Angular Material
- Angular CLI
- Node.js
- NPM
- MD2
- RXJS
- TypeScript
- JavaScript - ES6
- HTML5
- CSS3
- Oracle Java 8
- Spring Framework
- Spring Boot
- Spring Cloud
- Apache Maven
- Apache Tomcat
- MySQL
- Flyway
- Docker and Docker Compose
- Cloud Foundry UAA Server

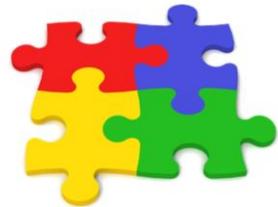
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- To download, install, set up, configure, and deploy Consent2Share requires expertise in several software programs, shown here.

Technical Overview: Architecture

- Employs a Microservices architecture →
 - ✓ Highly scalable
 - ✓ Flexible
 - ✓ Resilient
- Consent2Share Components:
 - ✓ User Interfaces
 - ✓ Microservices
 - ✓ Supporting Infrastructure Services
 - ✓ Third-party Services
- Spring Boot
- Spring Cloud
 - ✓ Spring Cloud Netflix
 - ✓ Spring Cloud Security



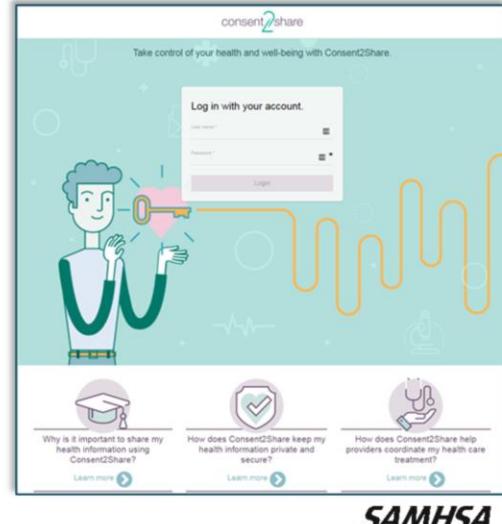
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- Consent2Share employs a Microservices architecture, which makes it highly scalable, flexible, and resilient.
- Most of the microservices are implemented as Spring Boot applications and utilize several Spring Cloud projects, including Spring Cloud Netflix and Spring Cloud Security.
- Consent2Share Components can be grouped as:
 - User Interfaces
 - Microservices
 - Supporting Infrastructure Services
 - And, Third-party Services

Technical Overview: Four User Interfaces

Patient UI	For patients to review and manage their consents
Provider UI	For providers to create and manage patient accounts
Staff UI	An admin UI to create and manage user accounts
Master UI	A single UI to login as patient, provider, or staff



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Consent2Share has four user interfaces:

- A Patient UI—for patients to review and manage their consents
- A Provider UI—for providers to create and manage patient accounts
- A Staff UI—which is an admin UI to create and manage user accounts
- And A MASTER UI—to login to all of the above UIs

Technical Overview: Microservices

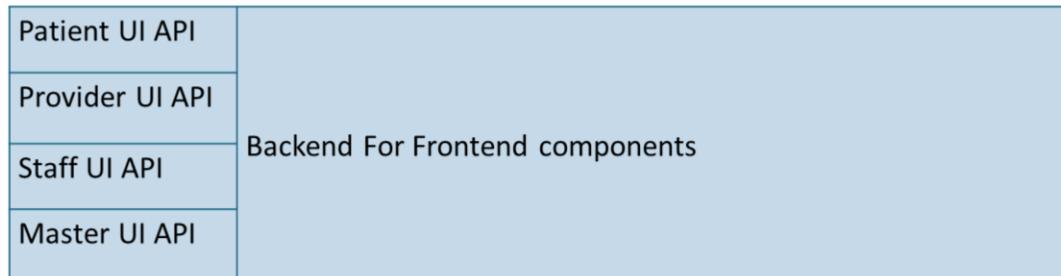
- Master UI API
- Patient UI API
- Provider UI API
- Staff UI API
- User Management Service
- FHIR Integration Service
- Provider Lookup Service
- Policy Enforcement Point Service
- Context Handler
- Patient Consent Management Service
- Patient Health Record Service
- Try My Policy
- Document Segmentation Service
- Document Validator Service
- Value Set Service

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- The backend of Consent2Share consists of many microservices that are small and focused on specific areas.
- These microservices provide RESTful API for external access.
- Some of these microservices also have persistence using MySQL.

Technical Overview: Microservices



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Consent2Share includes Backend for Frontend components for the Patient, Provider, Staff, and Master Uls.

Technical Overview: Microservices

User Management Services	<ul style="list-style-type: none">• User account creation process• User account activation• User disable• User update• User demographics persisting
FHIR Integration Services	<ul style="list-style-type: none">• Spring Boot project• Provides RESTful endpoints• Allows applications to publish and retrieve FHIR resources
Provider Lookup Services	<ul style="list-style-type: none">• Stores provider information as a provider directory• Provides a RESTful service for querying providers• Uses query parameters:<ul style="list-style-type: none">✓ First name, last name, gender, address, and phone for providers✓ Organization name, address, and phone for organizational providers

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Consent2Share microservices include:

- User Management Services—which allows various user management operations
- FHIR Integration Services—which allows applications to publish and retrieve FHIR resources
- And, Provider Lookup Services—which manages the provider query process

Technical Overview: Microservices

Policy Enforcement Point Service	<ul style="list-style-type: none">• Delegates the access decision to the Context Handler API• Uses the Document Segmentation Service for segmenting CCD documents
Context Handler	<ul style="list-style-type: none">• Makes PERMIT/DENY access decisions based on request contexts• Uses Policy Decision Point to evaluate requests against authorization policies
Patient Consent Management Service	Provides APIs for patients to manage their electronic consents including: <ul style="list-style-type: none">✓ Create consent✓ Edit consent✓ Delete consent✓ Consent eSignature✓ Manage patient provider list

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- Consent2Share includes a **Policy Enforcement Point Service**—which is key to the segmentation process
- A **Context Handler**—which evaluates requests against consents
- And a **Patient Consent Management Service**—Which helps patients to manage their electronic consents

Technical Overview: Microservices

Patient Health Record Service	<ul style="list-style-type: none">Manages and retains information about each patientManages C32 and/or C-CDA documents that patients have uploaded to test their consents using TryMyPolicy
Try My Policy	<ul style="list-style-type: none">Enables patients to preview a redacted version of their health record
Document Segmentation Service	<ul style="list-style-type: none">Segments patients' sensitive health informationUses the privacy settings selected in the patient's consent

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- Consent2Share includes a **Patient Health Record Service**—which can be used by patients to store their medical records,
- A **Try My Policy service**—that lets patients preview a redacted version of their health record,
- And a **Document Segmentation Service**—which segments documents based on patient consent

Technical Overview: Microservices

Document Validator Service	<ul style="list-style-type: none">• Validates C32, C-CDA R1.1 and C-CDA R2.1 clinical documents• RESTful Web Service wrapper around Model Driven Health Tools libraries<ul style="list-style-type: none">✓ Does schema validation for C32✓ Does schema and schematron validation for C-CDA✓ Returns the validation results from MDHT in the response• Used directly by the Document Segmentation Service to validate the document before and after the segmentation
Value Set Service	<ul style="list-style-type: none">• Manages sensitive categories, code systems, value sets, and etc.• Provides RESTful service to map coded concepts to sensitive categories• Provides the list of all sensitive categories available in the system

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Additional microservices include:

- A **Document Validator Service**—which validates a variety of clinical documents
- And a **Value Set Service**, which manages sensitive categories, value sets, and coded concepts

Technical Overview: Supporting Infrastructure Services

Configuration Server	<p>Provides support for externalized configuration, including:</p> <ul style="list-style-type: none"> ✓ Consent2Share UI and UI API ✓ Edge Server ✓ Patient Consent Management Service ✓ Provider Lookup Service ✓ Value Set Service
Discovery Server	<ul style="list-style-type: none"> • Facilitates microservices to dynamically discover each other • Promotes scalability <ul style="list-style-type: none"> ✓ Provides registry of Consent2Share service instances ✓ Provides a means for service instances to register, de-register, and query instances with the registry ✓ Provides registry propagation to other microservice (Eureka client) and Discovery Server (Eureka server cluster) instances
Edge Server	<ul style="list-style-type: none"> • Serves as gatekeeper to the outside world • Keeps unauthorized external requests from passing through • Uses Spring Cloud Zuul as a routing framework

Consent2Share uses Eureka and Zuul via Spring Cloud Netflix project to facilitate microservice orchestration, dynamic service discovery, load balancing, security, and server side routing.

- The Configuration Server provides support for external configuration
- The Discovery Server helps microservices to discover each other
- And the Edge Server acts as a gatekeeper to the outside world

Technical Overview: Third-party Services

Cloud Foundry User Account and Authentication Server	For authentication, authorization, issuing tokens for client applications, and user account management Implements OAuth2, OpenID Connect, JSON Web Token (JWT), and SCIM specifications
JBoss Drools Guvnor	A user interface and a versioned repository for business rules used by the Business Rule Management System
HL7 Application Programming Interface (HAPI) FHIR	A Java API for HL7 FHIR clients and servers

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Consent2Share uses the following third-party open source services:

- **CloudFoundry UAA Server**—for authentication, authorization, issuing tokens for client applications, and user account management
- **JBoss Drools Guvnor**—is a user interface and a versioned repository for business rules used by the Business Rule Management System
- **HAPI FHIR**—a Java API for HL7 FHIR clients and servers

Section Three: Technical and Organizational Considerations



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Thanks Angi.

During this next section, we will review a few key organizational considerations to implement Consent2Share

Technical Specifications

- Linux or Windows
- Supports Java and other open source technologies
- Uses standard API technologies
- Capable of sending and receiving Continuity of Care Documents, including C-CDAs
- Can integrate with FHIR servers and/or IHE profiles



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If you would like to develop and use Consent2Share, you will need an infrastructure that:

- Employs Linux or Microsoft Windows
- Supports Java and other open source technologies
- Uses standard API technologies
- Can send and receive Continuity of Care Documents
- And, can integrate with FHIR servers and/or IHE profiles.

Technical Functionalities

- Integrate third-party solutions with HIEs, EHRs, or FHIR
 - ✓ To support interoperable health record use in accordance with federal and state laws
- Provide data exchanges that conform to relevant standards
 - ✓ DS4P, HL7 Standards, etc.
- Provide Virtual Private Network for remote connectivity
 - ✓ E.g., between Consent2Share and HIE

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Your system must be able to support the following functionalities

- The ability to integrate third-party solutions with HIEs, EHRs, or FHIR
- The ability to provide data exchanges that conform to relevant standards
- The ability to provide Virtual Private Network for remote connectivity between Consent2Share and HIE

Organizational Specifications

- SMEs to evaluate value sets that are linked to Consent2Share sensitive categories
- Staff to finalize the definitions of sensitive data value sets from standard medical terminologies
- Process for developing new policies, procedures, and workflows for capturing patient consent that complies with state and federal laws
- Staff to teach patients how to use Consent2Share
- Patients need computers and email addresses to manage consents



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To implement Consent2Share your organization needs:

- Experts to evaluate value sets that are linked to Consent2Share sensitive categories
- Staff to finalize the definitions of sensitive data value sets from standard medical terminologies
- A process for developing new policies, procedures, and workflows for capturing patient consent
- Staff to explain the technology and show patients how to use it.
- Patients need computers and email addresses to provide their electronic consent and to manage their consent settings.

Other Considerations

- Identify the necessary stakeholders
 - ✓ HIE, HIE technology vendor, provider organizations, EHR vendors, etc.
- Assess initial infrastructure and long-term maintenance costs
 - ✓ Technical, operational, marketing, legal, etc.
- Consider incorporating Consent2Share into existing clinical workflows
- Provide patient training and develop patient materials:
 - ✓ Value of consent management
 - ✓ How to use the system
 - ✓ How it protects privacy and security
- Patients need access to computers or tablets

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- It is important to identify your stakeholders to get their support for using Consent2Share
- You must consider both the initial infrastructure and long-term maintenance costs for the HIE and the provider organizations.
- You must consider the resources required to incorporate Consent2Share into your existing clinical workflows.
- You will need to teach patients and develop patient education materials about Consent2Share
- Patients will need to be able to use computers or tablets.

Section Four: Obtaining Consent2Share



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For the next few minutes, I will walk you through the process of obtaining Consent2Share

Consent2Share Project Websites

GitHub Project Site: <https://bhits.github.io/consent2share/>

GitHub Umbrella Repository

- <https://github.com/bhits/consent2share>
 - ✓ Releases and links to microservice repositories
 - ✓ Documentation (development and deployment guides, etc.)

GitHub README Files

- <https://github.com/bhits/{microservice-repo}#readme>

DockerHub

- <https://hub.docker.com/u/bhits/>

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The Consent2Share GitHub and DockerHub Websites are shown here

- At the **Consent2Share Project Site**, you can obtain release and documentation links
 - The **GitHub Umbrella Repository** includes releases, links to the repositories for each release, and documentation
 - In each repository, you can find the **README files** as shown on the slide
- Also, the **DockerHub site** hosts the Consent2Share Docker images

Consent2Share

Home Technical Documentation Use Cases Financial Contact Us GitHub Docker Hub

Welcome to Consent2Share (C2S) on GitHub!

Announcements & News!

Current Release (Version 3.5.0)

Recent News! SAMHSA releases Version 3.5.0 on GitHub!

New to Consent2Share?

Consent2Share is an open source software application that allows patients to determine, through an online consent process, which health information they would like to share and not share with their primary and specialty health care providers.

- Developed to meet the need for patients to have meaningful choices to share their protected behavioral healthcare information
- Integrates with existing electronic health record (EHR) and health information exchange (HIE) systems using interoperability standards
- Supports federal and state requirements related to protected health information, such as 42 CFR Part 2
- Puts control of health information exchange in the hands of the person who has the right to decide who has access to his or her data: the patient.

 Terminology A glossary of acronyms, terms, and their definitions that are used frequently in the Consent2Share application project.	 Security and Privacy Information regarding security measures used while implementing the Consent2Share application.	 Implementer Support Important technical information that supports the implementation of the Consent2Share application.
 Documentation Technical and non-technical documentation for users who wish to implement the Consent2Share application.	 Financial Estimates of the financial and human resources required to implement Consent2Share aligned with key milestones and time requirements.	 Use Cases Illustrates how patients can use Consent2Share to selectively share protected health information and adhere to 42 CFR Part 2 confidentiality regulations.

This is what The Consent2Share Project Website on GitHub looks like.

It includes links and information about:

- Consent2Share Releases
- Deployment and Development Guides
- Admin User and Patient User Guides
- Technical Blueprint and links to README files
- Use cases, financial estimates, and terminology

Terminology Page



Terminology

A glossary of acronyms, terms, and their definitions that are used frequently in the Consent2Share application project

Terminology

Security and Privacy

Implementer Support

Current Release

Terminology	
A glossary of acronyms, terms, and their definitions that are used frequently in the Consent2Share application project	
42 CFR Part 2	42 CFR Part 2 (commonly referred to as "Part 2") are the federal regulations governing the confidentiality of drug and alcohol abuse treatment and prevention records
C32	A C32 is a type of Continuity of Care Document (CCD) which focuses on the patient's summary information. The data is extracted from RPMS. The demographic data and patient identity are confirmed through the MPI. Then the C32 document is put into the Registry and Repository.
C-CDA	Consolidated Clinical Document Architecture (C-CDA) is a complete architecture used to create documents and template methodologies for those documents. The primary function of the C-CDA is to standardize the content and structure for clinical care summaries. Templates are set at three levels – Document level, Section level and Entry level.
Consent Mgmt.	A module used to create and manage consent policies that determine the level of privacy applied to the patient's health record when it is shared between providers and/or patients and providers
CTX API	The Context Handler (CTX) API makes decisions based on the consent policy
Direct	A standards-based system component used for secure email communication and transactions between providers, patients and health care organizations
Docker	An open-source program that enables a Linux application and its dependencies to be packaged as a container
DSS API	The Data Segmentation Service (DSS) API handles segmentation of a patient's sensitive health information per their consent. BRMS service is included in DSS
EHR	The system component that providers use to manage a patient's health records and where patient health data will originate
FHIR	Fast Healthcare Interoperability Resources (FHIR) and pronounced as "Fire" defines a set of "Resources" that represent granular clinical concepts. The Resources can be managed in isolation, or aggregated into composite documents. Technical FHIR is a subset for the clinical domain. Resources are based on simple XML or JSON structures, with an http-based RESTful protocol where each Resource has predictable URL. Where possible, open internet standards are used for data representation.



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If you click on the Terminology Button, you can view a glossary of acronyms, terms, and their definitions that are used frequently in the Consent2Share application project

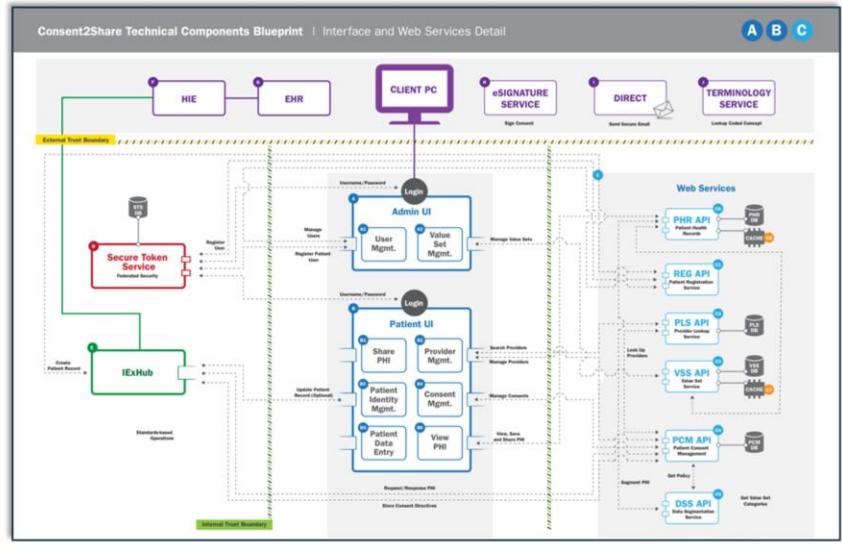
Security and Privacy Page



Security and Privacy

Information regarding security measures used while implementing the Consent2Share application

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If you select the Security and Privacy button, you can access the Consent2Share Technical Components Blueprint with security boundaries.

Implementer Support Page



Implementer Support

Important technical information that supports the implementation of the Consent2Share application

Implementer Support

- Terminology
- Security and Privacy
- Implementer Support**
- Current Release

Important technical information that supports the implementation of the Consent2Share application.

- [C2S Technical Blueprint](#)
- [C2S Read Me Information](#)
- [C2S Software Licensing Agreement](#)

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The Implementer Support Page will provide you with access to the following:

- The Technical Components Blueprint. It illustrates all of the components that Consent2Share needs to operate and the high-level data flow among them.
- README files and the Software Licensing Agreement.

Documentation Page



Documentation

Technical and non-technical documentation for users who wish to implement Consent2Share

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User Guides

User Guides
Additional Documentation

The following includes a user guide for developers seeking to implement Consent2Share and a Patient User Guide to help patients navigate and use Consent2Share.

Release - Version 3.4.0 (Current Release)

- [C2S Master User Guide](#)
- [C2S Provider User Guide](#)
- [C2S Staff User Guide](#)
- [C2S Patient User Guide](#)
- [C2S Deployment Guide](#)
- [C2S Development Guide](#)

Release - Version 3.3.0

- [C2S Provider User Guide](#)
- [C2S Staff User Guide](#)
- [C2S Patient User Guide](#)
- [C2S Deployment Guide](#)

The Documentation Page provides links to technical and non-technical documentation who wish to implement Consent2Share.

It includes links to the Development Guide and Deployment Guide.

It also includes links to Staff, Provider, Patient, and Master User Guides.

Financial Page



Financial

Estimates of the financial and technical resources required to implement Consent2Share aligned with key milestones and time requirements

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Consent2Share Sample Project Plan

Milestone	Description	Months Of Duration	Estimated Cost	Comments
1	Stakeholder Education, Standards, and Approach	1	25K	Should be done as part of overall implementation plan
2	Implementation Plan Development	1	25K	Should be done when designing stakeholder education
3	Patient Identification Integration	2-4	100K	This is work to integrate Consent2Share to the EHR/HIE
4	Patient Registration Enhancements	1	15K	This is work required to make small modifications to patient registration based on patient identification integration work
5	Deployment of Consent2Share micro services (API) applications	6-9	400K	This work is the deployment of the Consent2Share application inclusive of IExHub
6	Finalize Consent2Share Value Set Extensions	2-4	25K	This work is to finalize the Consent2Share value sets stored in Value Set Authority Center (VSAC)
7	Prepare Education Materials, Programs, and Baseline Patient Workflow	1-3	25K	This work is to put together education materials for new users of Consent2Share. This is the outcome of milestone 1
8	OTP Patient Data Sharing Implementation	1-3 (per practice)	10k (per practice)	This work is associated with working to connect behavioral health facilities to EHR/HIEs

Note: This project plan is provided as a general guide but may not be reflective of an installation at your specific facility/environment.

The Financial Page provides a link to:

- A Consent2Share Sample Project Plan as shown on this slide
- And a Consent2Share Checklist that lists technical requirements for implementing the application

Use Cases Page



Use Case

Illustrates how patients can use Consent2Share to selectively share protected health information and adhere to 42 CFR Part 2 confidentiality regulations

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Use Case: Sally Share

Sally uses the online consent management application Consent2Share to give her Maryland OTP an advanced authorization to share her addiction treatment records with the California OTP.

Her methadone treatment will continue uninterrupted.

Finally, the Use Cases Page includes a link to a simple Use Case. The Use Case illustrates how patients can use Consent2Share to selectively share protected health information and adhere to 42 CFR Part 2

Obtaining Consent2Share

Current Release

Use the link below to access the most current release version of Consent2Share residing on the BHITS Consent2Share File Repository.

Current Release - Version 3.5.0

Release Date - This version was released on 11/09/2017.

[Download C2S V3.5.0 from the C2S GitHub File Repository](#)

Previous Releases

Release - Version 3.4.0
Release Date - This version was released on 09/18/2017.
[Download C2S V3.4.0 from the C2S GitHub File Repository](#)

Release - Version 3.3.0
Release Date - This version was released on 08/07/2017.
[Download C2S V3.3.0 from the C2S GitHub File Repository](#)

Release - Version 3.2.0
Release Date - This version was released on 06/27/2017.
[Download C2S V3.2.0 from the C2S GitHub File Repository](#)

Features

- The user can select multiple providers as "FROM" or "TO" to share data by Patient ID.
- The user is reminded of PII constraints with a notice of disclosure when working with sensitive data.
- The provider can view the segmented CCD document as an HTML page in a single document viewer.
- The EExHub API is implemented to support FHIR to update the patient profile by Patient ID.
- An Angular UI Component Library is created for Consent2Share Shared Components.
- Values set data are synchronized with VSAC.
- The UI link is decoupled from edge server configuration.
- The log is aggregated and correlated across microservices.
- Third-party libraries are upgraded to fix critical security issues.
- CloudFoundry User Account and Authentication (UAA) Server is upgraded to support OAuth 2.0.

Documentation Updates

README.md files in repositories are updated.

NOTES:

Consent2Share 3.5.0 release includes:

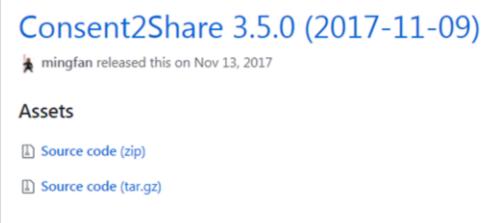
- Consent2Share UI 0.8.0: <https://github.com/bhits/c2s-ui/releases/tag/v0.8.0>
- Consent2Share UI API 0.8.0: <https://github.com/bhits/c2s-ui-api/releases/tag/v0.8.0>
- Configuration Server 0.5.0: <https://github.com/bhits/config-server/releases/tag/v0.5.0>
- Context Handler 2.5.0: <https://github.com/bhits/context-handler/releases/tag/v2.5.0>

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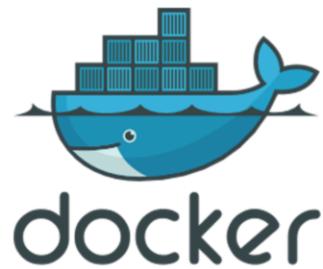
- When you click the “News” button on the Consent2Share Project Website home page, it will bring you to the current releases of Consent2Share.
- Incremental releases are posted on the GitHub umbrella repository releases page.
- Clicking on the chosen green Release button brings you to the specific release page on Consent2Share GitHub Umbrella Repository.
- These two pages have everything that a technical team needs to install, configure, deploy, and validate Consent2Share for your environment.

Two Options to Run Consent2Share

A. Download source code and manually build the project

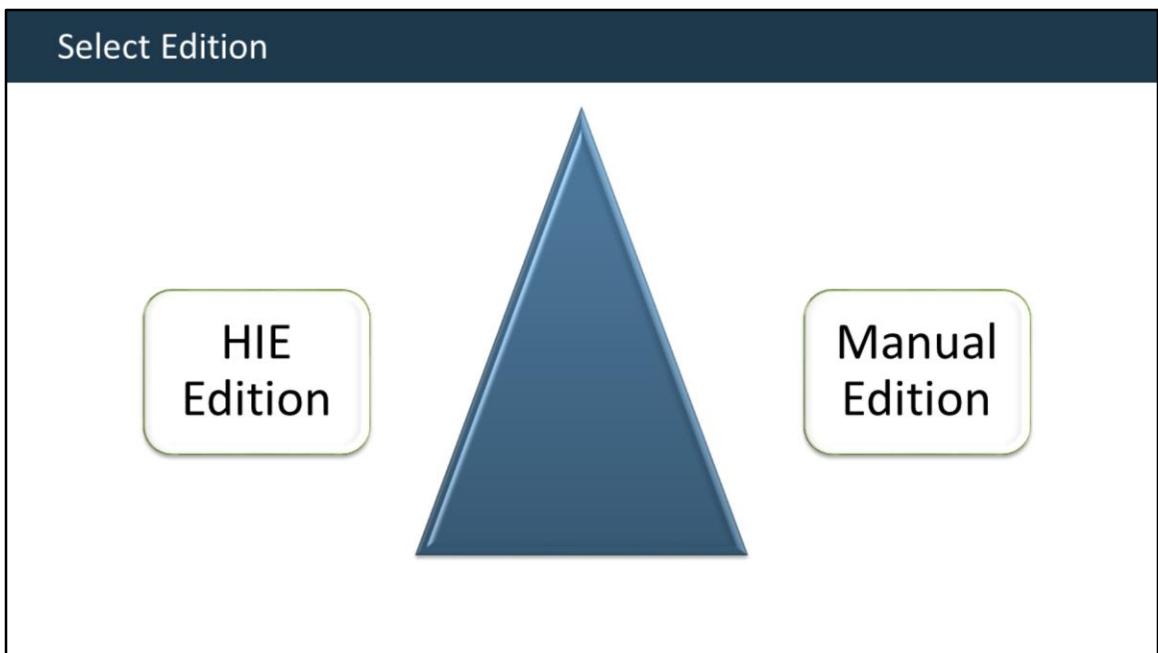


B. Deploy and run using Docker



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There are two options to run Consent2Share.
One way is to download the source code and manually build the project.
Or, you can deploy and run Consent2Share using Docker.
We recommend Docker because it streamlines the process.



- At this point, you will need to decide whether you want to run the HIE Edition or the Manual Edition.
- Based on your decision, you may need to use a different set of services and configurations
- Information about deploying the two editions is provided in the deployment guide.
- Using Docker is a more streamlined approach to handle this configuration.

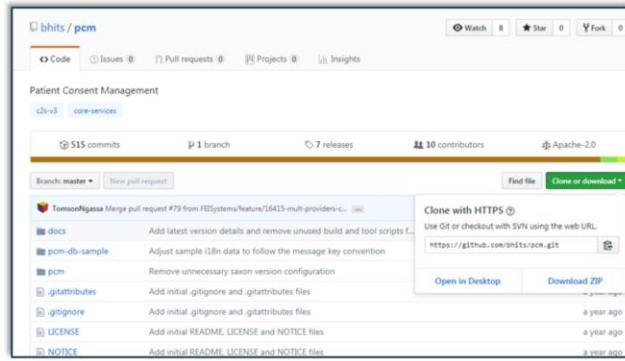
Option 1: Download Option

1. Setup your local development environment
2. Download source code from GitHub

```
$ git clone https://github.com/bhits/pcm.git
```

```
$ cd pcm/
```

```
$ git checkout 1.24.0
```



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- If you use the download option, **First**, setup your local development environment
- **And then** download the source code from GitHub using the sample commands provided on this slide.
- This command checks out a particular version of the Patient Consent Management API.

Option 1: Download Option, Continued

3. Modify code for your program needs

4. Build and run application locally

\$ mvnw clean install

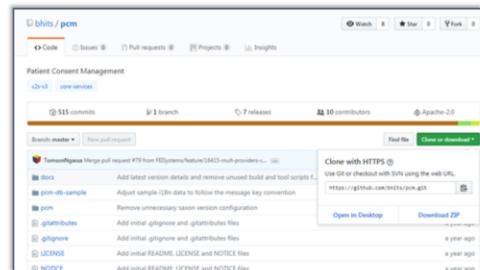
✓ Run as Docker container

\$ mvnw clean install docker:build

5. Deploy and Run Consent2Share

\$ java -jar pcm-x.x.x-SNAPSHOT.jar

\$ docker run -d bhis/pcm:latest



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- Next, you can modify the source code based on your program needs and technical environment.
- Next, build and run the Consent2Share application locally by utilizing the IDE.
- You can also build the Docker image based on your modified version using the second command.
- Finally, you deploy and run Consent2Share artifacts and images that were built in the previous step.

Option 2: Configure and Run Using Docker

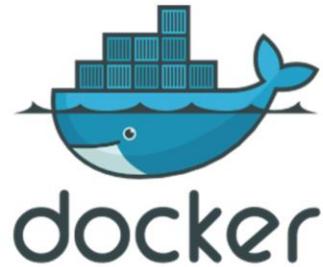
➤ Reference the Development and Deployment Guides

1. Setup your local/server environment
 - ✓ Install Docker and Docker Compose
\$ sh c2s_docker_install.sh
2. Configure your local/server environment
\$ sh c2s_config.sh
3. Select configuration option for environment

```
$ sh c2s_config.sh
This script is used to setup server configuration for Consent2Share.
1. EHR Edition App Server
2. EHR Edition DB Server
3. EHR Edition FHIR Server
4. HIE Edition App Server
5. HIE Edition DB Server
6. HIE Edition Hieos Server
Please select a server to setup:[1]
```

4. Use Docker Compose to run Consent2Share

```
$ docker-compose up -d
```



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- As a second option, you can configure and run Consent2Share using the released Docker images if you don't need to modify the source code.
- Before starting, you should first become familiar with the Consent2Share Development and Deployment Guides.
- First, you need to setup your local/server environment, which involves installing Docker and Docker Compose.
- You can use the script we provided to do the installations, or use it as a reference and install them manually yourself.
- Next, configure your local/server environment. We also provide a script for the configuration setup.
- Please refer to the deployment guide about how to use that script.
- Finally, you can use a single Docker Compose command to run Consent2Share based on the configuration you applied in the previous steps.

Consent2Share

Home Technical Documentation Use Cases Financial Contact Us GitHub Docker Hub

Welcome to Consent2Share (C2S) on GitHub!

 Announcements & News!

 Current Release (Version 3.5.0)

Recent News! SAMHSA releases Version 3.5.0 on GitHub!

New to Consent2Share?

Consent2Share is an open source software application that allows patients to determine, through an online consent process, which health information they would like to share and not share with their primary and specialty health care providers.

- Developed to meet the need for patients to have meaningful choices to share their protected behavioral healthcare information
- Integrates with existing electronic health record (EHR) and health information exchange (HIE) systems using interoperability standards
- Supports federal and state requirements related to protected health information, such as 42 CFR Part 2
- Puts control of health information exchange in the hands of the person who has the right to decide who has access to his or her data: the patient.

 Terminology A glossary of acronyms, terms, and their definitions that are used frequently in the Consent2Share application project.	 Security and Privacy Information regarding security measures used while implementing the Consent2Share application.	 Implementer Support Important technical information that supports the implementation of the Consent2Share application.
 Documentation Technical and non-technical documentation for users who wish to implement the Consent2Share application.	 Financial Estimates of the financial and human resources required to implement Consent2Share aligned with key milestones and time requirements.	 Use Cases Illustrates how patients can use Consent2Share to selectively share protected health information and adhere to 42 CFR Part 2 confidentiality regulations.

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So that is an overview about how to obtain and run Consent2Share. Remember that the Consent2Share GitHub Project Website has everything that you need to obtain and run Consent2Share in your technical environment.

For More Information

Contact Us

<p>Additional Resources</p> <p>HealthIT.gov (ONC) The Office of the National Coordinator for Health Information Technology (ONC)</p>	<p>Contact Information</p> <p>SAMHSA Headquarters Substance Abuse and Mental Health Services Administration 5600 Fishers Lane, Rockville, MD 20857</p> <p>Mailing Addresses</p> <p>U.S. Postal Service Delivery Substance Abuse and Mental Health Services Administration 5600 Fishers Lane, Rockville, MD 20857</p> <p>Overnight Delivery (FedEx, UPS, Airborne Express, DHL, etc.) Substance Abuse and Mental Health Services Administration 5600 Fishers Lane, Rockville, MD 20857</p> <p>Email Address ✉ SAMHSA Health IT Team</p> <p>For additional information, visit the SAMHSA Health Information Technology webpage.</p>
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SAMHSA welcomes your comments and suggestions.

At the Contact Us page, you can find the contact information for:

- SAMHSA
- The SAMHSA Health IT Team
- The SAMHSA Health IT webpage
- And a link to the Office of the National Coordinator for Health Information Technology.

Technical Questions



If you have technical questions about Consent2Share, please email us at samhsa.hit@samhsa.hhs.gov

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