Project Name	Backup Cluster Manager SEP
Online team meeting	https://tu-berlin.zoom-x.de/j/66460442542?pwd=6JDdHFzvrTj3bJokdNJSYxHA3b8F6r.1
Production system (if any)	TBD
Test system (if any)	TBD
GitHub repository	https://github.com/amosproj/amos2025ws02-backup-cluster-manager
GitHub feature board	https://github.com/orgs/amosproj/projects/90
GitHub imp-squared backlog	https://github.com/orgs/amosproj/projects/94
Team T-shirt (white)	https://www.shirtinator.de/s/WGBu8LkSRqOJZe-LDXqisw
Team T-shirt (black)	https://www.shirtinator.de/s/jG2py-QWSDeg3IraRTb-bQ
Additional materials	
Discord	https://discord.gg/mhFBrsTx
Figma Link Website	https://www.figma.com/design/kLihICBMvBVKCodv1OlY4Y/Website-Design?m=auto&t=UltPz3hhwCtSgsc5-1
Team maling list	oss-amos-proj2@lists.fau.de

Last Name	First Name	GitHub User Name	Email Address
Wysokinska	Xemena	xenia1w	xenia.wysokinska@gmail.com
Ostrizki	Jan	Stringrimm	jan.ostrizki@fau.de
Raju	Robin Jose	robinrj6	robin.jose.raju@fau.de
Nogu	Ervin	ervinn09	ervin.nogu@campus.tu-berlin.de
Krüger	Landolf	krueger-hash	l.krueger.1@campus.tu-berlin.de
Tröger	Nicolas	fe27hity	nico.troeger@fau.de
Killer	Hans	HansKiller-TH	hanskiller@web.de
Schulze	Levin	p0d3x	

		Product Owner					
#	Meeting Day	Review	Planning	Software Developer	Release Manager	Scrum Master	Comment
0	2025-10-15	-	-	Everyone else	-	Xemena Wysokinska	First Meeting
1	2025-10-22	Jan Ostrizki	Levin Schulze	Everyone else	-	Xemena Wysokinska	
2	2025-10-29	Levin Schulze	Jan Ostrizki	Everyone else	Nicolas Tröger	Xemena Wysokinska	
3	2025-11-05	Jan Ostrizki	Levin Schulze	Everyone else	Hans Killer	Xemena Wysokinska	Build Process Review
4	2025-11-12	Levin Schulze	Jan Ostrizki	Everyone else	Robin Rose Raju	Xemena Wysokinska	
5	2025-11-19	Jan Ostrizki	Levin Schulze	Everyone else	Ervin Nogu	Xemena Wysokinska	
6	2025-11-26	Levin Schulze	Jan Ostrizki	Everyone else	Landolf Krüger	Xemena Wysokinska	Mid-term due
7	2025-12-03	Jan Ostrizki	Levin Schulze	Everyone else	Nicolas Tröger	Xemena Wysokinska	
8	2025-12-10	Levin Schulze	Jan Ostrizki	Everyone else	Hans Killer	Xemena Wysokinska	
9	2025-12-17	Jan Ostrizki	Levin Schulze	Everyone else	Robin Rose Raju	Xemena Wysokinska	
10	2026-01-07	Jan Ostrizki	Jan Ostrizki	Everyone else	Ervin Nogu	Xemena Wysokinska	
11	2026-01-14	Jan Ostrizki	Levin Schulze	Everyone else	Landolf Krüger	Xemena Wysokinska	
12	2026-01-21	Levin Schulze	Jan Ostrizki	Everyone else	Nicolas Tröger	Xemena Wysokinska	
13	2026-01-28	Jan Ostrizki	Levin Schulze	Everyone else	Hans Killer	Xemena Wysokinska	
14	2026-02-04	Levin Schulze	Jan Ostrizki	Everyone else	Robin Rose Raju	Xemena Wysokinska	Demo day!
Product owners, software developers, and Scurm Master are set and ideally don't change over time; the critical part is the Release Manager role you need to define here							

Goals	
	Fulfill the needs of our customer (SEP) Working Prototype Good team experience Learn more/Gaining experience about working agile Sharing knowledge among each other Transparent culture & good communication Learn how to open-source
Meeting norms	
	Weeklies: At 12:30 on Wednesday on Zoom (https://tu-berlin.zoom-x.de/j/66460442542?pwd=6JDdHFzvrTj3bJokdNJSYxHA3b8F6r.1) 90 mins. Weekly/Bi-Weekly Sync with SEP On time, give notice if someone can't make/with delay Raising hands for better communication flow in bigger meetings like e.g. weekly
Working norms	**Working norms**
	Developers have a cutoff day a before at noon Revert if MR if it breaks other code and if there is no time for a fix Use a CI build/test pipeline MR with random reviewer (preferably a nominated one)
Coordination norms	
	Coordination over Discord (https://discord.gg/mhFBrsTx) Inform others if you can't work temporarily
Communication norms	
	Communication over mainly on Discord, Email as emergency/backup option Weekly meeting over Zoom Use webcams as possible Special channels for different groups and topics
Consideration norms	
	Polite, supportive, respectful, forward, formal & constructive communication English if at least one nonnative speaker present
Cont. improvement norms	
	Try to help each other Actional item in retro to improve the team Adapt CI and work along it. Do not try to bypass it. Additional channel on Discord if someone needs help
Rewards	
	Filters on Zoom (SFW!!) Small tokens
Sanctions	

	Not allowed to use video filters or wear a weird hat Review one additional PR Problems require intervention worst case with professor
Signatures	
Scrum Master	Xemena Wysokinska
Product owner	Levin Schulze
Product owner	Jan Ostrizki
Software developer	Robin Jose Raju
Software developer	Ervin Nogu
Software developer	Landolf Krüger
Software developer	Nicolas Tröger
Software developer	Hans Killer
Software developer	

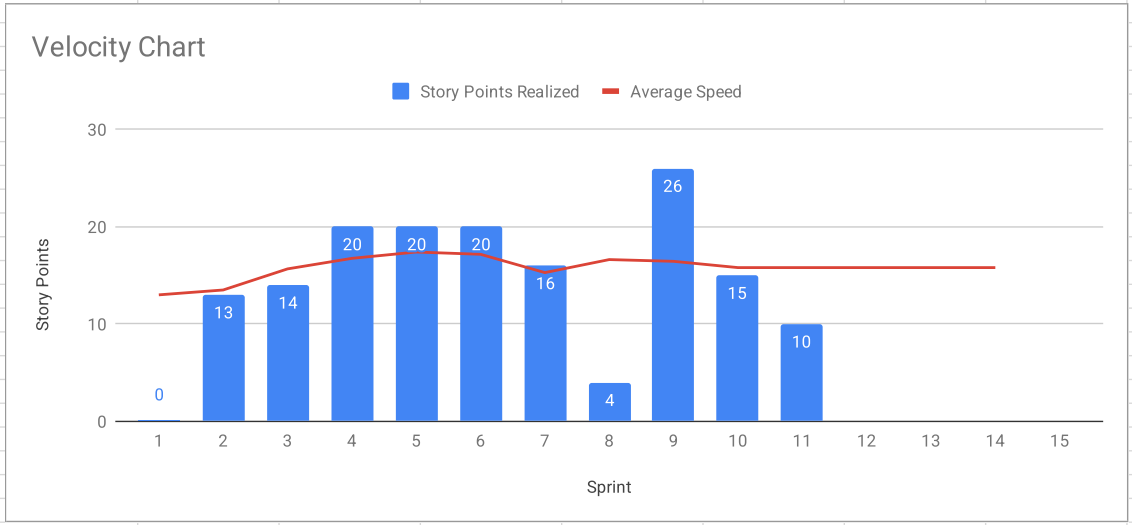
Product Vision	Project Mission
The Backup Cluster Manager software introduces a distributed approach into a system currently consisting of unconnected nodes . The software should demonstrate the benefits of a distributed approach, and should mirror real life use-cases and scenarios, and the effectiveness of using this approach. By using springboot, it can be easily integrated, and used as basis for enterprise projects while offering a user friendly UI built with Angular & TailwindCSS.	Creating an MVP for our industry partner which implements an alternative approach for managing distributed nodes. It offers an UI for editing and overview data from nodes as well as users and their permissions. The backend simulates backup nodes and how nodes will interact with each other. Frontend communicates with the backend to get/edit/delete data such as users, permissions as well as backups & cluster information.

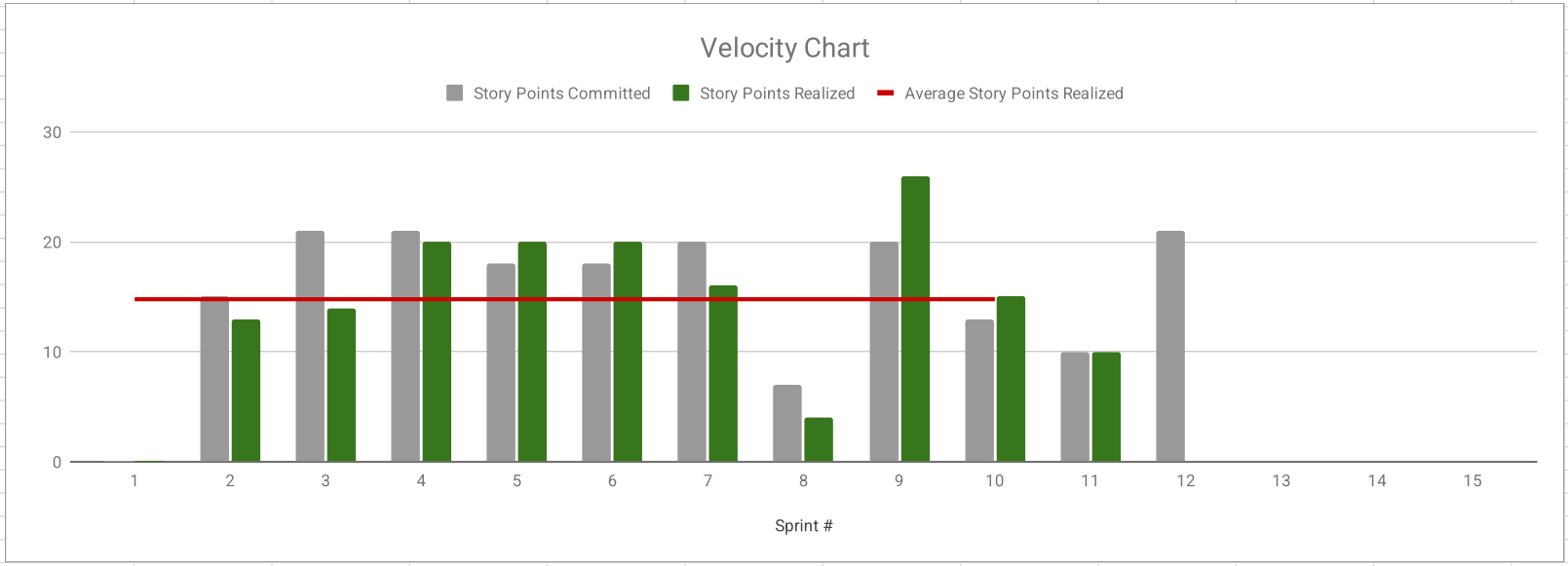
Term	Definition
Cluster Manager	Supervisor instance that manages a set of SEP Sesam server nodes, handles registration of nodes, manipulation and synchronization of e.g. users, groups, and permissions or other meta data. Provides a REST interface for the Frontend and proxies requests to other nodes
SEP Sesam	SEP's Backup and Recovery software product, backups and restores are managed by a SEP Sesam Server
SEP Sesam Server Node, Node	Instance of SEP Sesam Server which shall be part of the cluster
Cluster Mode	Configuration flag on a node, indicating the node should join a cluster. In this mode, permissions and users shall be managed by the cluster manager
Supervisor Instance	Synonymous with Cluster Manager
Node Registration	Process of adding a node to a cluster
User / Group	Authenticated principals that can be created, modified and assigned permissions.
Client	A system that should be backed up by an SEP Sesam Server (e.g. a person's laptop computer)
Frontend, FE	The primary web UI, which runs in the browser and communicates with the CM's REST endpoints (directly, or via proxy, LB, etc TBD)
Synchronization Process	The mechanism of propagating information, such as users, groups, or permissions to downstream nodes
Proxy Functionality	The ability of issuing requests or listing data from a node via the CM's REST API
Backend, BE	Application / Code for the Cluster Manager and Simulated Server Node
Superuser	System user who has all permissions and can create new admins
Administrator	System users who can do and see everything except create/remove admins
Operator	System users who can see backups in the FE but not modify anything (read-only user)
Restore User	System users who can restore backups, no access to user management
Backup User	System users who can create backups, no access to user management

Sprint #	Sprint goal
1	None
2	None
3	None
4	Working MVP with FE, CM and 2 Nodes
5	Working MVP with FE, CM and 2 Nodes
6	Mid-Project Release
7	Working Backup Schedules and Mock Tasks
8	Working Permissions / User Groups + Bulk Data
9	Advanced Cluster Management
10	Advanced Cluster Management Pt2
11	Groups/Permissions + Webflux
12	Polishing + Metrics
13	QA/Fixing
14	Final Project Release

Sprint #	Story Points Realized	Story Points Committed	Average Story Points Realized
1	0	0	14.77777778
2	13	15	14.77777778
3	14	21	14.77777778
4	20	21	14.77777778
5	20	18	14.77777778
6	20	18	14.77777778
7	16	20	14.77777778
8	4	7	14.77777778
9	26	20	14.77777778
10	15	13	14.77777778
11	10	10	
12		21	
13			
14			
15			
	PLEASE CREATE THE VELOCITY CHART ON A NEW TAB USING THE DATA FROM THIS TAB		

Sprint	Average Speed
2	13
3	13.5
4	15.66666667
5	16.75
6	17.4
7	17.16666667
8	15.28571429
9	16.625
10	16.44444444
11	15.8
12	15.8
13	15.8
14	15.8
15	15.8



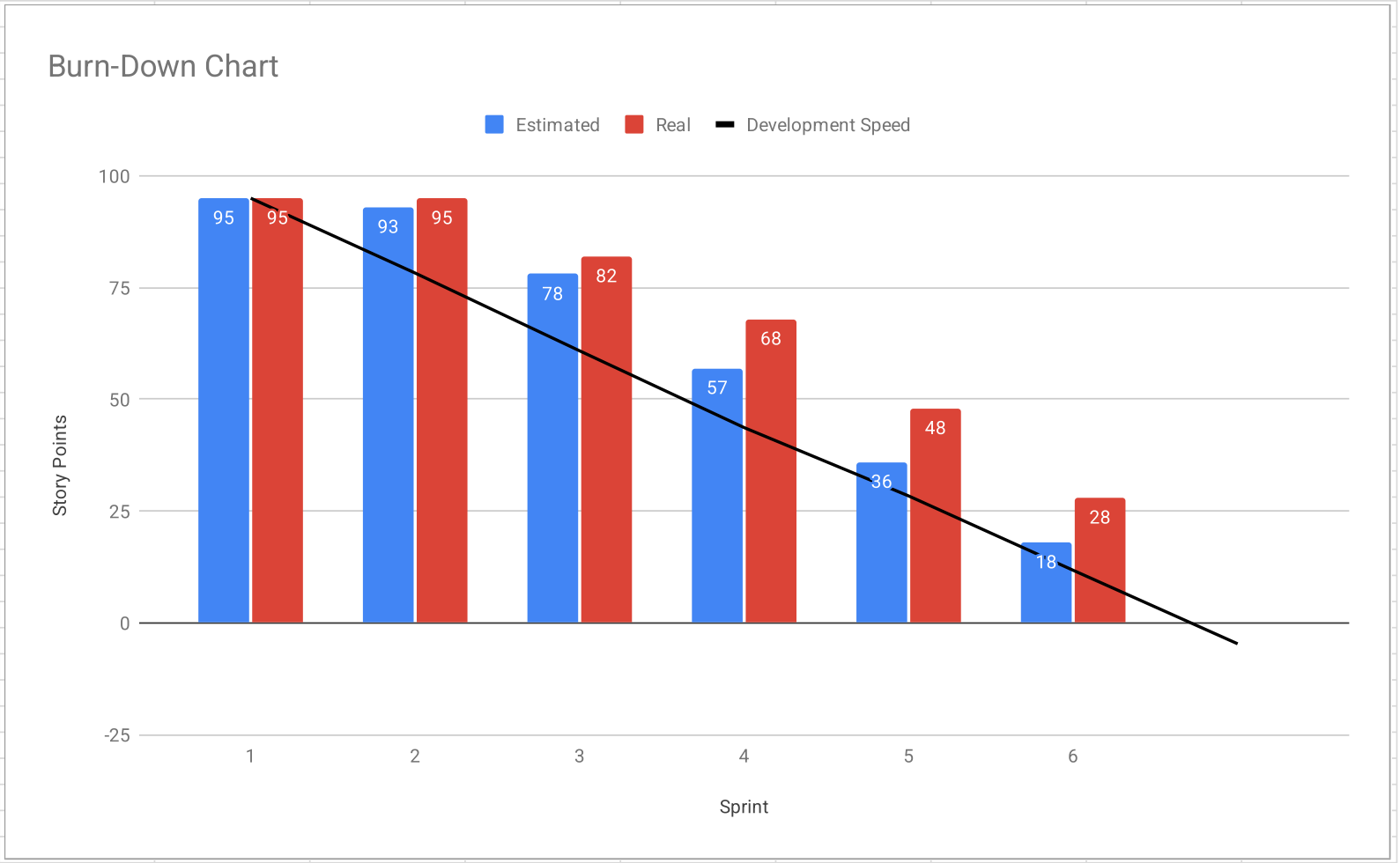


Sprint	Goal	Feature Name	Est. size	Est. remaining	Real size	Real remaining
Release						
Total			95	95		
Sprints						
1	**None**		2	95	0	95
2	**None**		15	93	13	95
3	**None**		21	78	14	82
4	**Working MVP with FE, CM and 2 Nodes**		21	57	20	68
5	**Working MVP with FE, CM and 2 Nodes**		18	36	20	48
6	**Mid-Project Release**		18	18	20	28
Features						
1	**None**					
		Deciding our Tshirt design	1		0	
		Deciding our team logo	1		0	
2	**None**					
		Deciding our Tshirt design	1		1	
		Setup Build Process for Backend	3		2	
		Setup Basic Angular Project (Frontend)	2		2	
		Create first architecture draft	3		3	
		Setup Build Process For Frontend	3		2	
		Create Basic Spring Boot Project	2		2	
		Deciding our team logo	1		1	
3	**None**					
		Define entities for DBs	3		3	
		Create Docker Compose Configuration	3		2	
		Setup Database and Integrate it	2		1	
		Setup Dockerfile (Backend)	3		2	
		Create Basic UI Layout	3		2	
		Create Overview page	3		3	
		Add functionallity to sidebar	1		1	

Sprint	Goal	Feature Name	Est. size	Est. remaining	Real size	Real remaining
		Create multiple pages for Router Outlet	3		2	
4	**Working MVP with FE, CM and 2 Nodes**					
		Backend: Create Cluster Manager	3		3	
		Frontend: Create Node Tab	3		3	
		Backend: Get Nodes API	3		3	
		Backend: Get Backups API	3		3	
		Frontend: Create Backups Tab	3		3	
		Frontend: Header moving while scrolling	0		0	
		Add Jacoco To Build And Integrate As Badge	3		2	
		Backend: Create User Node	3		3	
		Create Documentation	0		0	
		Create a test setup with 3 nodes	0		0	
		Backend: Create Database	0		0	
5	**Working MVP with FE, CM and 2 Nodes**					
		Create Documentation	0		0	
		Create a test setup with 3 nodes	3		2	
		Backend: Create Database	3		1	
		Backend: Add Pagination To APIs	0		0	
		Implement functions for DB	3		5	
		List Users	0		0	
		Create / Update / Delete User	0		0	
		Filter / Sort Backups	0		0	
		Bug: Main is not building	2		2	
		Backend: Implement node (un)registration process	5		8	
		Create Backup	0		0	
		Delete Backup	0		0	
		Filter / Sort Nodes	0		0	
		Create Build Process Video	2		2	
6	**Mid-Project Release**					
		Create Documentation	0		0	
		Create / Update / Delete User	3		3	
		Filter / Sort Nodes	3		3	
		Filter / Sort Backups	0		0	
		Create Backup	5		5	
		Delete Backup	2		3	
		Basic Backup Schedules	0		0	
		Mock Backup Tasks	0		0	

Sprint	Goal	Feature Name	Est. size	Est. remaining	Real size	Real remaining
		Backend: Add Pagination To APIs	3		3	
		List Users	2		3	
		PLEASE CREATE THE BURNDOWN CHART ON A NEW TAB USING THE DATA FROM THIS TAB				

Burn-Down Chart	
95	16.75
78.25	17.4
60.85	17.16666667
43.68333333	15.28571429
28.39761905	16.625
11.77261905	16.44444444
-4.671825397	15.8



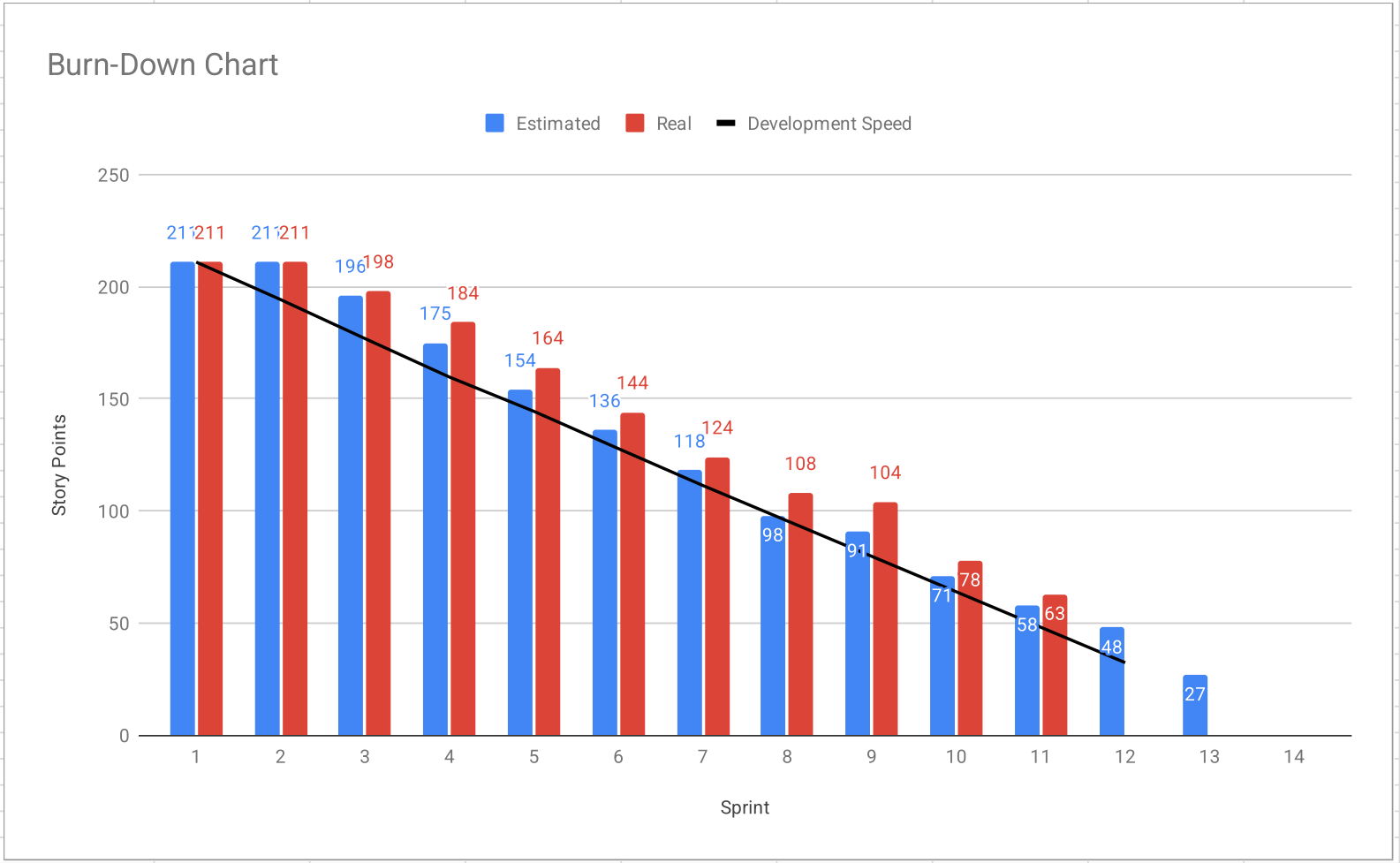
Sprint	Goal	Feature Name	Est. size	Est. remaining	Real size	Real remaining
Release						
Total			211	211		
Sprints						
1	**None**		0	211	0	211
2	**None**		15	211	13	211
3	**None**		21	196	14	198
4	**Working MVP with FE, CM and 2 Nodes**		21	175	20	184
5	**Working MVP with FE, CM and 2 Nodes**		18	154	20	164
6	**Mid-Project Release**		18	136	20	144
7	**Working Backup Schedules and Mock Tasks**		20	118	16	124
8	**Working Permissions / User Groups + Bulk Data**		7	98	4	108
9	**Advanced Cluster Management**		20	91	26	104
10	**Advanced Cluster Management Pt2**		13	71	15	78
11	**Groups/Permissions + Webflux**		10	58	10	63
12	**Polishing + Metrics**		21	48		
13	**QA/Fixing**		14	27		
14	**Final Project Release**		13			
Features						
1	**None**					
		Deciding our Tshirt design	0		0	
		Deciding our team logo	0		0	
2	**None**					
		Deciding our Tshirt design	1		1	
		Setup Build Process for Backend	3		2	
		Setup Basic Angular Project (Frontend)	2		2	
		Create first architecture draft	3		3	
		Setup Build Process For Frontend	3		2	
		Create Basic Spring Boot Project	2		2	
		Deciding our team logo	1		1	
3	**None**					
		Define entities for DBs	3		3	

Sprint	Goal	Feature Name	Est. size	Est. remaining	Real size	Real remaining
		Create Docker Compose Configuration	3		2	
		Setup Database and Integrate it	2		1	
		Setup Dockerfile (Backend)	3		2	
		Create Basic UI Layout	3		2	
		Create Overview page	3		3	
		Add functionallity to sidebar	1		1	
		Create multiple pages for Router Outlet	3		2	
4	**Working MVP with FE, CM and 2 Nodes**					
		Backend: Create Cluster Manager	3		3	
		Frontend: Create Node Tab	3		3	
		Backend: Get Nodes API	3		3	
		Backend: Get Backups API	3		3	
		Frontend: Create Backups Tab	3		3	
		Frontend: Header moving while scrolling	0		0	
		Add Jacoco To Build And Integrate As Badge	3		2	
		Backend: Create User Node	3		3	
		Create Documentation	0		0	
		Create a test setup with 3 nodes	0		0	
		Backend: Create Database	0		0	
5	**Working MVP with FE, CM and 2 Nodes**					
		Create Documentation	0		0	
		Create a test setup with 3 nodes	3		2	
		Backend: Create Database	3		1	
		Backend: Add Pagination To APIs	0		0	
		Implement functions for DB	3		5	
		List Users	0		0	
		Create / Update / Delete User	0		0	
		Filter / Sort Backups	0		0	
		Bug: Main is not building	2		2	
		Backend: Implement node (un)registration process	5		8	
		Create Backup	0		0	
		Delete Backup	0		0	
		Filter / Sort Nodes	0		0	
		Create Build Process Video	2		2	
6	**Mid-Project Release**					
		Create Documentation	0		0	
		Create / Update / Delete User	3		3	
		Filter / Sort Nodes	3		3	

Sprint	Goal	Feature Name	Est. size	Est. remaining	Real size	Real remaining
		Filter / Sort Backups	0		0	
		Create Backup	5		5	
		Delete Backup	2		3	
		Basic Backup Schedules	0		0	
		Mock Backup Tasks	0		0	
		Backend: Add Pagination To APIs	3		3	
		List Users	2		3	
7	**Working Backup Schedules and Mock Tasks**					
		Basic Backup Schedules	5		5	
		Mock Backup Tasks	5		3	
		Create Documentation	2		2	
		Filter / Sort Backups	3		1	
		Authentication	5		5	
8	**Working Permissions / User Groups + Bulk Data**					
		Bug: Nodes Cannot Register (Auth)	2		2	
		Permission handling (Authorization)	0		0	
		Dynamic Page/Content Updates	0		0	
		Cluster Manager is a Node	5		2	
		Architecture Review / Revisit	0		0	
		Bulk Data Insertion / Preparation	0		0	0
9	**Advanced Cluster Management**					
		Bulk Data Insertion / Preparation	3		3	
		Permission handling (Authorization)	5		8	
		Architecture Review / Revisit	5		8	
		Dynamic Page/Content Updates	2		2	
		Architecture Review: Proper Operation Foward	5		5	
10	**Advanced Cluster Management Pt2**					
	#146	Updated Join Behavior	5		5	
	#147	Managed/Unmanaged Mode	5		5	
	#148	Shutdown, Restart and Remove	3		5	
11	**Groups/Permissions + Webflux**					
	#164	Webflux Refresh	0		0	
	#165	Update UI	3		5	
	#77	Permissions/Groups Tab	5		3	
	#145	Improve Data Caching	0		0	
	#173	Tunneling Research	2		2	
	#183	BUG: Not able to re-add node after shutdown	0		0	
	#184	BUG: Shutdowned node should not be removed #184	0		0	

Sprint	Goal	Feature Name	Est. size	Est. remaining	Real size	Real remaining
	#185	BUG: Automatic refresh doesn't work for nodes page	0		0	
12	**Polishing + Metrics**					
	#164	Webflux Refresh	5			
	#145	Improve Data Caching	5			
	#163	Expose Metrics via Actuator/Prometheus	5			
	#194	Stress Testing Research	2			
	#183	BUG: Not able to re-add node after shutdown	2			
	#184	BUG: Shutdowned node should not be removed #184	1			
	#185	BUG: Automatic refresh doesn't work for nodes page	1			
13	**QA/Fixing**					
	#132	Update Dashboard	5			
		Stress Testing	5			
		BUG: Backup Modal Window	2			
	#190	Update UI #2	2			
		Grafana Setup	5			
14	**Final Project Release**					
		Update Documentation	2			
		Update SBOM	2			
		Create tunneling research article	2			
		Comment code	2			
		Fixing final bugs	5			

Burn-Down Chart	
211	16.75
194.25	17.4
176.85	17.16666667
159.6833333	15.28571429
144.397619	16.625
127.772619	16.44444444
111.3281746	15.8
95.5281746	15.8
79.7281746	15.8
63.9281746	15.8
48.1281746	15.8
32.3281746	



#	Feature Definition of Done	Sprint Release Definition of Done	Project Release Definition of Done
	Code review has been completed and code has been merged	Project builds, deploys, and tests successfully	Project can be opened on desktop browsers
	All feature branches have been merged and closed	Database update scripts succeed, consistency tests pass	Design documentation has been updated
	New feature code has been documented	Sprint release notes have been written	User documentation has been updated
	Component tests have been written and pass	Change log has been updated	The backend simulation must succeed and produce an artifact.
	Component builds with build pipeline	BOM is updated	The frontend should be able to handle user inputs & send them to the backend
	Fulfills all acceptance criteria for item		

Type	Link / reference

#	Context	Name	Version	License	Comment
1	Frontend	Tailwindcss	4.1.16	MIT License	Utility-first CSS Framework
2	Frontend	Flowbite	3.1.2	MIT License	Component library built on Tailwind CSS.
3	Frontend	Angular	20.3.7	MIT License	
4	Frontend	typescript	5.9.3	Apache-2.0	
5	Frontend	zonejs	0.15.1	MIT License	
6	Frontend	tslib	2.8.1	MIT License	
7	Frontend	karma	6.4.4	MIT License	
8	Frontend	karma-chrome-launcher	3.2.0	MIT License	
9	Frontend	karma-coverage	2.2.1	MIT License	
10	Frontend	karma-jasmine	5.1.0	MIT License	
11	Frontend	karma-jasmine-html-reporter	2.1.0	MIT License	
12	Frontend	postcss	8.5.6	MIT License	
13	Frontend	rxjs	7.8.2	Apache-2.0	
14	Backend	postgresql(-docker)	latest	MIT	
15	Backend	PostgreSQL JDBC Driver	42.7.7	BSD-2	
16	Backend	H2	2.3.232	MLP 2.0	
17	Backend	spring-boot	3.5.6	Apache-2.0	
18	Backend	Flyway	11.7.2	Apache-2.0	
19	Backend	Mybatis	3.0.3	Apache-2.0	
20	Backend	Lombok	latest	MIT	

Last Name	First Name	Value					
Wysokinska	**Xemena**			**2.00**	**OK**		
Ostrizki	**Jan**						
Raju	**Robin Jose**	2					
Nogu	**Ervin**	2					
Krüger	**Landolf**	2		0	No size		
Tröger	**Nicolas**	2		1	Trivial size		
#REF!	**#REF!**			2	Small size		
Killer	**Hans**	2		3	Medium size		
Schulze	**Levin**			5	Large size		
				8	Very large size		
				13	Too large (size)		
How to play planning poker							
1. Everyone type their number into their value field, don't hit return yet							
2. Someone, perhaps a product owner, count down 3.. 2.. 1..							
3. Then, everyone hit return to submit their value							