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Datomic Cloud Releases

This page lists the releases for all [Datomic Cloud software](#):

- [current releases](#)
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Datomic Software

Datomic Cloud software includes:





- CloudFormation templates to [start](#) or [upgrade](#) a system
- the [Client API library](#)

- [Ion libraries](#)
- the [Datomic CLI tools](#)

Track dev-local releases via the [dev-local documentation](#).

Current Releases

- Ion libraries (ion and ion-dev) are available on the [datomic-cloud repository](#).
- The client API library is available on the maven [Central Repository](#).
- CloudFormation templates and CLI tool are linked directly in the table below. Clicking on the file icons below will copy the CF template URL into your clipboard.

Artifact	Release Date	Release
Client API	2020/07/21	com.datomic/client-cloud "0.8.102"
ion-dev	2020/08/07	com.datomic/ion-dev "0.9.276"
ion	2020/08/07	com.datomic/ion "0.9.48"
CLI Tools	2020/04/28	0.10.82
Storage	2020/08/07	704-8957 
Solo	2020/08/07	704-8957 
Production	2020/08/07	704-8957 
Query Group	2020/08/07	704-8957 

Critical Notices

If you are using any version of Datomic Cloud older than 470-8654.1 (April 2019), follow the recommendations in the table below. See the release link for full details.

Affected	Date	Release	Recommendation
Production, Solo, Query Groups	2020/02/21	616-8879	Introduced with 569-8835, Upgrade as soon as possible
Production, Solo, Query Groups	2019/04/25	470-8654.1	Upgrade as soon as possible
Production, Query Groups	2019/02/22	470-8654	See Note if upgrading to or past this version
Production, Query Groups	2018/10/11	441-8505	upgrade as soon as possible

Release History

Blanks in this table indicate that a component was not upgraded in a particular release.

Clicking on the file icons below will copy the CF template URL into your clipboard

Date	CFT Version	Summary	Storage	Solo	Production	Query Group	Client	CLI
2020/08/06	704-8957	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2020/08/06		Ion dev and Ion						
2020/07/21		Client Cloud Update					"0.8.102"	
2020/07/17		Client Cloud Update					"0.8.101"	
2020/05/14	668-8927	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2020/05/14		Ion dev and Ion						
2020/05/14		Client Cloud Update					"0.8.96"	
2020/04/28		CLI Tools						0.10.82
2020/02/21	616-8879	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2020/02/19		CLI Tools						0.10.81
2020/02/03		Ion dev 251						
2020/01/20	589-8846	Storage and Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2019/11/26		CLI Tools						0.9.33
2019/11/26	569-8835	Storage and Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2019/11/19		Ion dev 247						
2019/11/14		Client Cloud Update					"0.8.81"	
2019/11/12		Ion dev						
2019/11/06		CLI Tools						0.9.21
2019/10/21	535-8812	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2019/10/01		CLI Tools						0.9.11
2019/10/01	512-8806	Storage and Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2019/08/15		Ion dev and Ion						
2019/08/06	482-8794	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2019/07/09	480-8772	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2019/06/27	480-8770	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2019/06/18		Client Cloud Update					"0.8.78"	
2019/06/04		Ion dev						
2019/05/16	477-8741	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2019/05/15		Ion dev and Ion						

Date	CFT Version	Summary	Storage	Solo	Production	Query Group	Client	CLI
2019/04/25	470-8654.1	Storage and Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2019/02/22	470-8654	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2018/12/10	454-8573	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2018/12/10		Ion dev and Ion						
2018/11/28		Client Cloud Update					"0.8.69"	
2018/10/11	441-8505	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2018/09/07	441-8477	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2018/08/21		Client Cloud Update					"0.8.66"	
2018/08/21		Client Cloud Update					"0.8.63"	
2018/08/15		Ion dev and Ion						
2018/08/15	409-8407	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
2018/07/11		Ion dev and Ion						
2018/07/03		Client Cloud Update					"0.8.56"	
2018/06/29	402-8396	Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
2018/06/06	397-8384	Storage and Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		"0.8.54"	
2018/02/21	303-8300	Storage and Compute Update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
2018/01/15	297-8291	Initial Release	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

Release Notes

2020/08/07 704-8957 - Compute Update

- New feature: [Cancel | <https://docs.datomic.com/cloud/transactions/transaction-processing.html#cancel>]
- New region: `eu-west-2`
- Fix: Prevent race condition in valcache that could lead to a failed read
- Improvement: Better entity predicate error messages
- Improvement: Better indexing performance
- Upgrade: The version of the Presto server running on the access gateway is now 338. This includes an upgrade to Java 11 on the access gateway.
- Upgrade: The AMI is now based on the 6/17/2020 version of Linux 2 base AMI
- Upgrade: AWS SDK for Java to version 1.11.826
- Upgrade: core.async to version 1.3.610

2020/08/07 0.9.276 - ion-dev && 0.9.48 - ion

- New feature: [Cancel | <https://docs.datomic.com/cloud/transactions/transaction-processing.html#cancel>]

- cloud-deps update

2020/07/21 - 0.8.102 - Client-Cloud Update

- Fix: `datomic.api.client.async/client` now accepts `:dev-local` as a `:server-type`

2020/07/17 - 0.8.101 - Client-Cloud Update

- New feature: [dev-local](#)

2020/05/14 - 668-8927 - Compute Update

- New feature: [qseq](#)
- New feature: [index-pull](#)
- New feature: [xform](#)
- Enhancement: Improve index efficiency.
- Enhancement: Improve performance of pull in queries.
- Enhancement: Improve internal record keeping of active databases that could lead to spurious error messages.
- Enhancement: Base AMI is now sourced from Amazon Linux 2, and includes recent security updates

Upgrade: As recommended by AWS, we have upgraded our base AMI to Amazon Linux 2 [<https://aws.amazon.com/blogs/aws/update-on-amazon-linux-ami-end-of-life/>]. This new AMI includes a breaking change to the linux netcat utility that Ions use to deploy new code to a cluster. We encourage all users of Ions to upgrade to [version 0.9.265](#) or later of ion-dev prior to upgrading to this release.

2020/05/14 - 0.9.265 - ion-dev && 0.9.43 - ion

- Enhancement: Calculate transitive list of dependencies in ``.dependency-conflict`_map`
- Update dep list for [Cloud 668-8927](#) release

2020/05/14 - 0.8.96 - Client-Cloud Update

- New feature: [qseq](#)
- New feature: [index-pull](#)
- Updated jetty dependencies from 9.4.24.v20191120 to 9.4.27.v20200227.

2020/04/28 - 0.10.82 - CLI Tools

- Enhancement: Add ``--ssh`` option to the [gateway restart command](#) to pass ssh configuration options as if using ``ssh -o <option>``

2020/02/21 - 616-8879 - Compute Update

- New feature: ``[:db/retract eid aid]`` will retract all values for an eid/aid combination.
- Critical Fix: regression introduced in 569-8835 where ``datoms``, ``seek-datoms``, and ``index-range`` return incorrect results if ``Iterable.iterator`` is called more than once on the returned value.
- Fix: respect ``nil`` as a limit in query ``pull`` expression.
- Fix: respect ``false`` as a default in query ``pull`` expressions for boolean-valued attributes.
- Fix: allow arbitrary ``java.util.List`` (not just Clojure vectors) for lookup refs.

2020/02/19 - 0.10.81 - CLI Tools

- Many new features - [see docs](#)

2020/02/03 - 0.9.251 - ion-dev

- Increase timeout for how long a deployment will wait for dependencies to sync on an instance

2020/01/20 - 589-8846 - Storage and Compute Update

- New region: `sa-east-1`
- Better tagging of resources created by Datomic
- Fixed problem using with-db from ions

2019/11/26 - CLI Tools - 0.9.33

- Note: This release requires a version of Datomic Cloud 569-8835 or newer
- Enhancement: `datomic-gateway restart` now just restarts the process running on the access gateway, instead of restarting the whole instance. This results in faster restart times when making configuration changes. Restarting a bastion-only access gateway has no effect.
- Enhancement: Automatically retrieve the hostkey from the access gateway. There will no longer be a warning about the authenticity of the host.

2019/11/26 - 569-8835 - Storage and Compute Update

- Fix: resolve tempids for reference attributes inside tuples.
- Enhancement: performance improvement for range predicates in analytics support
- Enhancement: SSH public keys automatically handled by access gateway and proxy script
- Enhancement: AutoScalingGroup details exposed as CloudFormation Outputs
- Enhancement: [JDBC metadata](#) support in analytics
- Upgrade: AWS Lambda Runtimes moved to NodeJs 10.x

2019/11/19 - 0.9.247 - ion-dev

- Better error message for invalid `ion-config.edn`.
- Update commands to match the preferred approach of [installing ion-dev in your user deps.edn](#)
- Use `slf4j-simple` to prevent console warning when invoking tools.

2019/11/14 - 0.8.81 - Client-Cloud Update

- Documentation string updates

2019/11/12 - 0.9.240 - ion-dev

- Upgrade Clojure tools.deps.alpha to 0.8.584

2019/11/06 - CLI Tools - 0.9.21

- Enhancement: Added `--ssho` to allow any SSH `-o` option to be passed, removed `--no-host-key-checking` option
- `--instance-wait` option renamed to `--wait`

2019/10/01 - 535-8812 - Compute Template Update

- Fix: prevent exception thrown when handling COUNT(*) clauses in analytics support.
- Fix: do not create redundant `:db.install/attribute` datoms for idempotent schema operations.
- Update transactor Clojure dependency to 1.10.1.
- Enhancement: New AWS Region - ap-northeast-1.

2019/10/01 - CLI Tools - 0.9.11

- Initial release of [CLI tools](#)

2019/10/01 - 512-8806 - Storage and Compute Template Update

- New feature preview: Analytics. See <https://docs.datomic.com/cloud/analytics/analytics-concepts.html>.
- Fix: Allow Datomic Cloud to launch correctly in accounts that have a large number of existing ASGs.

2019/08/15 - 0.9.234 - ion-dev && 0.9.35 - ion

- Enhancement: allow for the inclusion of the target dir in the `:paths` list.

2019/08/06 - 482-8794 - Compute Template Update

- New: Upgrade from t2 to t3 instances for bastion and query groups.
- Fix: `tx-range` now returns a map with a `:data` key, consistent with the docs.
- Fix: Correctly handle boolean attributes in composite tuples.
- Fix: Prevent erroneous attempts to use Datomic On-Prem's excision feature.

2019/07/09 - 480-8772 - Compute Template Update

- Fixed problem where databases that change an attribute from ``:db.cardinality/one`` to ``:db.cardinality/many`` may become unavailable after a process restart.

2019/06/27 - 480-8770 - Compute Template Update

- New feature: [Tuples](#).
- New feature: [Attribute predicates](#).
- New feature: [Entity specs](#).
- New feature: [Return maps](#).
- Fix: ``sample`` aggregate could hang query thread.

2019/06/18 - 0.8.78 - Client-Cloud Update

- New feature: [Return Maps](#).
- New feature: Reverse references in nav (try it in [REBL](#)).

2019/06/04 - ion-dev 0.9.231

- Improvement: Fixed issue where some older Java libraries could not be loaded in an ion application

2019/05/16 - 477-8741 - Compute Template Update - [HTTP Direct](#)

The 477-8741 release contains fixes, enhancements, and dependency updates:

- Enhancement: [HTTP Direct](#) integration for ions.
- Enhancement: Improved integration between ions and AWS Network Load Balancers. This eliminates transient errors during rolling deployments.
- Enhancement: Improved integration between ions and AWS Lambda. This also eliminates transient errors.
- Fix: Issue where cluster nodes could become unresponsive when serving multiple databases or a burst of `tx-range` queries.
- Fix: Nested queries could deadlock the query pool on Solo nodes.
- Fix: Increased direct memory on Production nodes to prevent out-of-direct-memory errors.
- Update: Version 1.7.26 of org.slf4j libraries.

2019/05/15 - 0.9.229 - ion-dev && 0.9.34 - ion

- New Feature: HTTP Direct
- Enhancement: Improved integration between ions and AWS NLBs

2019/04/25 - 470-8654.1 - Compute, Storage, and [Query Group](#) Update

Note Our Cloud Formation templates use node.js lambdas to create support functions for Cloud Formation. April 30th 2019 is the end of life date for AWS Lambda node.js runtime that we currently use.

Effective May 1, 2019, Datomic Cloud CloudFormation templates older than 4/25/2019 will no longer execute. Datomic systems launched with those templates will continue to run, but any template operations (launching or upgrading CloudFormation stacks) will fail.

All Datomic Cloud users should [upgrade](#) to [470-8654.1](#) at their earliest convenience.

For more information see the AWS [runtime support policy](#).

- Critical: Updated to Node.js 8.10 runtime. All Datomic Cloud users should [upgrade](#) at their earliest convenience.

2019/02/22 - 470-8654 - Compute Template Update

Note If you have created a VPC Endpoint using the provided CloudFormation Template, you will need to delete that CloudFormation Stack prior to upgrading to this version of Datomic Cloud.

Attempting to upgrade to or past this release without deleting the Stack will result in a failed update with the message: Export <SystemName>-VpcEndpointServiceName cannot be deleted as it is in use by <SystemName>-vpc-endpoint

See [the troubleshooting documentation](#) for more information.

The 470-8654 release contains fixes, enhancements, and dependency updates:

- Fix: Production nodes now use the [documented -Xss values](#) for starting the JVM, preventing stack overflow when compiling complex ion applications.
- Fix: Fixed bug where ion connections could fail to become aware of recent transactions in a timely manner.
- Fix: Allow bigint values in transaction data.
- Fix: Corrected allowlist handling of function calls from datalog rules.
- Enhancement: New AWS Region - ap-southeast-1.

- Enhancement: Improved valcache cleanup algorithm.
- Enhancement: Reduce storage overhead of transactions.
- Enhancement: Defer creation of VPC Endpoint Service until specifically needed for [cross-VPC client access](#).
- Update to version 2.9.8 of [Jackson](#).
- Update to version 1.11.479 of the [AWS SDK for Java](#).

2018/12/10 - 454-8573 - Compute Template Update

The 454-8573 release contains a number of performance and availability enhancements:

- Enhancement: You can configure systems to [preload a database](#) before serving requests, eliminating a source of [unavailable anomalies](#).
- Enhancement: Ion deployments [load active databases before serving requests](#), eliminating a source of [unavailable anomalies](#).
- Enhancement: Improved throughput for transactions initiated by ion applications running the Production Topology.
- Enhancement: Improved performance for systems that create and delete many databases (e.g. test systems)
- Enhancement: Improvements to logging.

2018/12/10 - 0.9.186 - ion-dev && 0.9.28 - ion

- Enhancement: Increase CodeDeploy timeout to 5 minutes.
- Enhancement: Include doc strings for user facing functions in build artifact

2018/11/28 - 0.8.71 - Client-Cloud update

- Add compatibility with com.cognitect/aws-api
- Add Datafy
- Upgraded http-client to 0.1.87
- Improved error reporting

2018/10/10 - 441-8505 - Critical Update - Compute Template Update

Release 441-8505 includes critical updates. All users of the Production Topology and Query Groups should [upgrade](#) to 441-8505 immediately. The Solo Topology is not affected.

- Critical: fixes a problem that can cause portions of the log to become inaccessible. Please update as soon as possible.

2018/09/07 - 441-8477 -Compute Template Update

- New feature: [query groups](#).
- New instance type option: i3.xlarge for [Production](#).
- Improved memory settings: more stack space for [Solo](#), more heap space for Production.
- Bugfix: fixed bug that could prevent a Production node from beginning indexing jobs.

2018/08/21 - 0.8.63 - Client-Cloud update

- Bugfix: fixed bug that could cause a `with` database query to go to the wrong node in a production cluster.
- Bugfix: fixed Jetty configuration that could cause a client to prevent JVM from shutting down.
- Upgraded transit-clj to 0.8.313

- `:query-group` parameter is no longer required in the client arg-map

2018/08/15 - 0.9.176 - ion-dev && 0.9.26 - ion

- Enhancement: [parameters](#) library for working with the [AWS Systems Manager Parameter Store](#)

2018/08/15 - 409-8407 - Compute Template Update

- Bugfix: allow retraction of `:db/unique` attributes
- Bugfix: coerce Integer values to long when needed in transactions
- Enhancement: better memory utilization allows larger query results
- Enhancement: automatically rollback deployments when an ion application fails to load
- Added support for `ap-southeast-2` (Sydney) region

2018/07/10 - 0.9.173 - ion-dev && 0.9.14 - ion

- New Feature: `datomic.ion.cast` library for [monitoring ions](#)
- Bugfix: fixed race condition in ion code loading that could allow ion invocation before namespace completely loaded
- Enhancement: [warn on dependency conflicts](#)
- Improvement: prefer shell-friendly symbols instead of strings as arguments to `datomic.ion.dev` CLI commands
- Improvement: better error messaging when [deploying](#) to the wrong region.
- Improvement: list available deploy groups in [push output](#)
- Improvement: enforce the requirement for `:uname` when project has a `:local/root` in `deps.edn`.

2018/07/02 - 0.8.56 - Client Cloud Update

- Enhancement: added sync to client API. See <https://docs.datomic.com/cloud/transactions/client-synchronization.html>
- Better error message when unable to connect to cluster or proxy.

2018/06/29 - 402-8396 - Compute Template Update

- Upgraded AWS libs to 1.11.349
- Upgraded Jackson libs to 2.9.5
- Fixed cache problem where all `d/with` databases deriving from a common initial call to `d/with-db` had the same common value.

2018/06/06 - 0.8.54 - client-cloud Update

- Enhancement: added [:server-type :ion](#)
- Enhancement: ensure recentness of `d/db conn`

2018/06/06 - 397-8384 - Storage and Compute Template Update

- Enhancement: [Datomic Ions](#)
- Improvement: Replaced Application Load Balancer with Network Load Balancer. If your applications run in a separate VPC you will need to [configure a VPC endpoint](#).

2018/02/21 - 303-8300 - Storage and Compute Template Update

- Bugfix: doubles and floats allowed in transactions
- Bugfix: avoid unnecessary ":AdopterSkippedOlder" alert when creating new database
- Update: latest Amazon Linux patches
- Improvement: better error handling in Storage template
- Improvement: reduce memcached timeout

2018/01/15 - 297-8291 - Initial Release

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