

VICIdial: Dependable, Secure and Independent

Selecting a Contact Center system, whether it is a premise system or is installed in the cloud, can be a complex process with many different factors to take into consideration. This white paper is designed to help you evaluate VICIdial as a viable option for your contact center infrastructure. It was written to provide an understanding of how the VICIdial software works, and how the hardware components of a VICIdial cluster can be engineered to provide a highly scalable and flexible system that can meet the data-flow, security, reliability and quality requirements of your contact center, all without any future issues of vendor lock-in.

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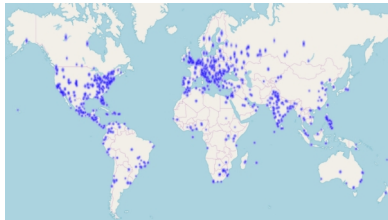
Reliability, Redundancy and Uptime

With the VICdial contact center software being Open-Source and freely available to anyone anywhere in the world, there are hundreds of companies that provide VICdial services and hosting. Many of these companies can provide adequate service options for smaller contact centers, but most of them are not designed to offer high-availability solutions.

The software itself has many reliability and redundancy features built-in, from load-balanced agent logins across multiple agent servers, to Primary/Secondary database configurations. The failure of one or more servers in your cluster can result in zero downtime, if your system is built and configured properly. A VICdial system can even be configured to handle carrier and network fail-over scenarios automatically.

As for system uptime, there are 24/7 contact centers running VICdial that have been continuously handling phone calls without disruption for years on end, all while allowing active hardware to be regularly rebooted and serviced on a rotating schedule without affecting production at all. There are even some North American 911 emergency dispatch organizations that have trusted VICdial to run their call center operations.

VICdial is so well regarded that there have been over 100,000 unique installs of new VICdial servers in over 100 countries around the world in just the last 10 years. Making VICdial the most widely used full-featured contact center solution in the world.



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Independence

VICdial is free for anyone to use. There are no end-user use-license restrictions, meaning that you can have as many users and as many phone lines on your system as you want, and you do not have to pay any fees for licensing as you grow.

With the actual source code of VICdial installed alongside the VICdial software on each server, you have the ability to see how everything works, and you even have the ability to change the code if you want to.

There is no vendor lock-in with VICdial, and no vendor can turn off your software on your own system, so there is no ability for vendor lock-out of your system either. VICdial also has no expiration date, there are companies running VICdial on their own systems for well over a decade, and those systems can keep running as long as the hardware is maintained.

One real-world example of why this independence is important involves a large publicly-traded financial services company based in Texas. This company had just completed a multi-year project to install and integrate with a large proprietary call center platform at a cost of millions of dollars. Less than a year after that project was complete, that proprietary call center platform was purchased by another entity and this financial services company was told that their brand new system would be end-of-life and unsupported in only 2 years. After looking around at their options, they discovered VICdial, and less than a year later they had migrated all of their call centers to use VICdial. They have been running on that platform undisturbed for the last 14 years.



Scalability and Flexibility

VICdial is extremely scalable and flexible, it can be used in all kinds of situations by many different kinds of organizations of all sizes.

Scalability

The capacity of a VICdial system is dependent on many different factors, including: The number of concurrent agents, the number of concurrent phone lines, the outbound answer rate, the average call length, the type of server hardware being used, and several other factors.

The largest stand-alone VICdial cluster we are aware of consists of over 20 servers and is able to handle over 500 concurrent agents and over 2000 concurrent phone calls.

With the addition of the build-in Cross-Cluster-Communication features in VICdial, we have connected a dozen VICdial clusters together for the same client to be able to support over 1600 agents handling over 6 million phone calls a day, with over 300,000 of those being inbound phone calls.

Flexibility

VICdial agents can handle inbound and outbound phone calls, inbound emails and website customer chat sessions all through the same agent web screen from anywhere in the world with an adequate Internet connection.

VICdial has the ability to create custom forms within the agent screen to handle almost any kind of data input, with 100+ data fields available in each custom form. These custom forms can even offer an agent the option to switch between different forms while on the same phone call.

Customizable agent scripts are also built-in, including the ability to embed your own CRM system or scripting engine within the agent screen itself. There are even VICdial installs that completely hide the default agent screen, instead using only the VICdial Agent API and a simple set of custom-built linear agent web screens to allow agents to more simply proceed through their call flows.

As for call routing, VICdial allows for skills-based routing as well as ranking of individual agents in those skills to optimize your operations in both inbound and outbound call handling.

VICdial's dynamic language display features allow you to have individual agents and managers using the web screens in different display languages on the same system at the same time. You can even modify individual phrases in any of the 16 built-in display languages (*including English, Spanish, French, Japanese, and a dozen other languages*), or even build your own full or partial translations if you want.

Some other VICdial features include: Third-party conference calling within the agent screen, Inbound preserve-place-in-line, Post-call customer surveys, Scheduled callbacks, Outbound CallerID management, Dropped-call management, Outbound call quota lead ranking, and Internal chat messaging with agents and managers.



Security

VICIdial has many security features built into it, such as:

- SSL encrypted(https) agent and manager interface screens and data transport
- Masking of sensitive custom field data from agents and managerial staff
- The ability for agents to send customers to a secure IVR to enter in sensitive information
- Encrypted recordings of phone call audio
- Restricted access to audio call recordings, with logging
- Secure calls to agents and managers using either WebRTC or SRTP soft-phones
- Encrypted user password logins
- System-wide minimum password lengths, allowing up to 100-character passwords
- Segmented user group access and permissions
- Two-Factor Authentication (email, voice, SMS)
- Encrypted database storage of custom field data

In addition to the above features, you can also use optional hardware on your database server to allow your database data to be encrypted at-rest.

Along with the above security measures, the maintainers of VICIdial regularly monitor security vulnerability website feeds for any exploits announced on any related software, and if VICIdial specifically is being targeted, a patch is usually posted within 24 hours of exposure.

As for the VICIbox Linux software(<http://vicibox.com>), it is based on current OpenSuSE Linux releases, which are maintained routinely with current security patches. Commercial Linux support is also available directly from SuSE if it is needed.

Regulatory Compliance

VICIdial has tools and features to allow you to be in compliance with several national and state regulatory measures.

In the USA, there are sets of both federal and state regulations on telephone calls being placed by companies to their customers. VICIdial has features to allow you to be in compliance with both FCC and FTC regulations at the federal level, as well as specific features allowing for regulations in states such as Florida, Oklahoma and Washington that restrict the number of call attempts to a single phone number within a 24-hour period. For federal and state Do-Not-Call list compliance, we have partnered with DNC.com to offer built-in tools to allow filtering of your calling lists within VICIdial.

In the UK, VICIdial has specific features based around compliance with OFCOM outbound calling regulations.

In the EU, VICIdial has GDPR compliance tools built-in as well.

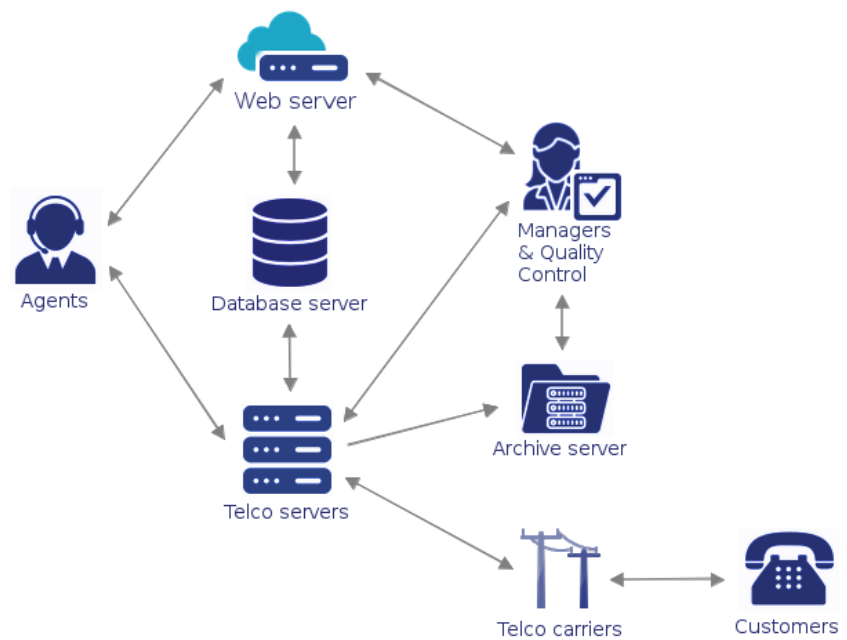


Architecture

A VICIdial system can be as small as a single computer server handling all necessary functions, up to a multi-server cluster with over a dozen machines each handling different functions depending on the requirements of the cluster.

In the diagrammed example below, there are three dedicated servers for telco services(voice), one database server(data) and one web server(agent and manager screens), along with an archive server to store phone call recordings and system backups.

This specific example as shown would support a standard predictive-dialer setup for a VICIdial cluster that would be able to handle 75 concurrent agents and 400 concurrent phone lines. If this system were to only handle manual-dial calling, it could easily support over 200 agents.



The servers in the above example all use standard off-the-shelf components. The telco servers and web servers are fairly low-powered machines, built with single quad-core processors, 8GB RAM and dual standard hard drives. The database server is a more high-end machine, with more RAM, CPUs and faster hard drives with a MegaRAID hardware RAID card inside. The archive server is mostly the same as the telco and web servers, except for the addition of a long-term-storage based RAID card and many more high-capacity hard drives.



Agent and Administration Screens

The VICIdial Agent and Administration web screens are designed to work with any modern web browser. They are also designed to work in larger distributed web environments and they have no requirement for web-session management, so even a basic web load balancer can be used for the VICIdial agent and admin web screens if one is required.

The VICIdial web admin screens give you access to configure the 3000+ settings available in the VICIdial system. They also include dozens of built-in reports to analyze your agents and system performance, as well as the ability to export selected data.

Quality Control

The VICIdial Quality Control module allows you to have QC agents review selected agent interactions with customers, including call recordings and lead data. The QC module has the ability to tag recordings with timestamps when specific events occur. There are also QC scorecards that allow for the grading of specific aspects of agent contacts with the ability for a QC agent to enter notes and a score for each specific aspect.

Another facet of Quality Control available in VICIdial is the ability to live-monitor agents, which can easily be done with a single click using the built-in Real-Time Report.

Third-Party Integrations

VICIdial can easily integrate with many third-party services and programs, including dozens of CRM systems on the market.

Some of the CRM integrations supported include: Teamsupport, Insightly, Pipedrive, Vtiger, Zoho, Salesforce.com, Zendesk, SugarCRM, LessAnnoyingCRM, MailChimp, Google Sheets, WordPress, Gmail, Lawmatics and Hubspot

If your CRM allows web-based integrations, VICIdial can probably interoperate with it. CRM integration can be as simple as a web page opening a CRM web screen up with customer data on it when a phone call is received by an agent, or it can go as far as back-end data and settings synchronization.

Some of the other third-party offerings include: DNC.com DNC List Management and Cellphone Filtering, Cepstral Text-to-Speech, Amazon Polly Text-to-Speech, Orex Oreka Agent Screen Recording, KHOMP Answering Machine Detection, TILTX STIR/SHAKEN carrier solutions, Predictive Voice Analytics solutions and a WordPress website “call me” Plug-in.



Data Input and Output

VICIdial has robust API offerings, including the ability to remotely control the functions of an agent's screen, as well as many administrative and data functions that allow for automated input and output processes to be set up with external systems.

Through the APIs, real-time web leads can be inserted directly into the VICIdial system, and they can even trigger an immediate phone call to be placed to the new lead. Furthermore, there are back-end lead importing processes that can be set up as regularly scheduled batch processes.

In the other direction, VICIdial can send data to outside systems at several different trigger points, from when a call is sent to an agent to when an agent ends and sets a status for a call, or when a new lead is created in the system, or even when a call is hung up without having gone to an agent first. You can also have the agent screen send every agent event to an outside system if you want.

Additionally, there are multiple built-in reports and back-end processes that can facilitate batch data import and export from a VICIdial system. There is even an Automated Reports web interface that allows any of the dozens of built-in web-based reports to be automatically emailed or uploaded over FTP on a scheduled basis.

Another data access option is the ability to set up a remote secondary database server that can securely sync with the primary VICIdial database server in real-time, giving live data access locally to you, without affecting production processes if intensive queries were run on it, for internal company use for data export or analysis.



Commercial Support and Hosting

The VICdial Group (<https://vicial.com>) is the official creator and maintainer of the VICdial Open-Source Contact Center software. They have been in operation for over 15 years and have helped thousands of clients around the world. In addition to offering support, training, system installation, consulting and customization services, 24/7 emergency support is also available

VIChost (<https://vicihost.com>), which is run by the VICdial Group, offers managed hosting services for VICdial. They can do things with VICdial that no other companies can. Since 2007, VIChost has helped thousands of companies run VICdial servers on their custom-built and managed cloud of dedicated VICdial servers. VIChost also offers a feature that almost no other hosted contact center provider does: The ability to move your VICdial system to your own hardware at any time. You can even move an existing VICdial premise system to VIChost hosted if you would like to.

Industry Recognition

VICdial has been recognized by several different independent industry organizations as one of the best solutions in the Contact Center space:

- Capterra Shortlist: 2023
- Software Advice Most Recommended: 2020, 2021, 2022
- Capterra Top 20: 2019
- GetApp Category Leader for: 2018, 2019, 2020, 2021, 2022
- Software Advice Front Runners: 2017, 2018, 2020, 2021, 2022
- Insights Success 10 Most Innovative Contact Center Solution Providers List for 2018
- CIO Review magazine, Best Open-Source solution providers for 2017
- CIO Review magazine, Most promising contact center technology providers for 2016
- Inc. magazine Inc 500 | 5000, For 2013
- Internet Telephony East 2011, "Best of Show" Call Center
- VO.IP Germany 2008, 2nd place for Call Center Applications
- Sourceforge.net 2006 "Project of the Year", VOIP Projects



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