


Make experiences *flow*

About NICE

With NICE (Nasdaq: NICE), it's never been easier for organizations of all sizes around the globe to create extraordinary customer experiences while meeting key business metrics. Featuring the world's #1 cloud native customer experience platform, CXone, NICE is a worldwide leader in AI-powered self-service and agent-assisted CX software for the contact center—and beyond. Over 25,000 organizations in more than 150 countries, including over 85 of the Fortune 100 companies, partner with NICE to transform—and elevate—every customer interaction.

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Accelerate Customer Experience Innovation with an Open Development Platform

Speed Your Digital Transformation
by Developing on an Open
Customer Experience Platform

WHITE PAPER



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INTRODUCTION

As customers rapidly embrace new forms of digital engagement, your organization must respond with what many are calling a revolutionary digital and customer experience (CX) transformation. Fortunately, as the internet evolves to become an extension of the datacenter, IT leaders can now build innovative applications in less time by utilizing open platforms and API's. This paper will discuss the advantages of utilizing a contact center platform and how the right platform can make it faster and easier for IT leaders to build and maintain CX innovations, which contact center architectures are best suited for this, and how your team can best unleash these capabilities.

THE TRANSFORMATION ENGINE

Cloud contact center solutions are well known for helping organizations realize tremendous cost savings with their flexible “pay-as-you-go” model. However, an additional, but often underappreciated, benefit is that their underlying services can also be integrated into your core business applications by using their published service API’s. This level of integration offers even more compelling reasons to consider investing in a CCaaS solution because it further improves your technology ROI and accelerates your digital and CX transformation.

It’s important to note that on-premises, hosted or other cloud-washed solutions often don’t provide this advantage. The most fundamental reason is that in many cases, these solutions are too monolithic and “single-tenant” in design. In other words, they are not architected nor built using a requisite web service or microservice model. This presents two limitations. First, they do not adequately isolate services, resources and access from other application processes. Second, they cannot adequately scale and deliver the elasticity needed to accommodate load demands. Because of these inherent limitations, many on-premise or hybrid premise/cloud solutions don’t publish service API’s.

HOW AN OPEN PLATFORM ACCELERATES APPLICATION DEVELOPMENT

A cloud contact center solution is a superior solution for rapid CX application development because it addresses the limitations of premises-based architectures. A cloud platform, by design, is an open platform. It's built using a services architecture that delivers scalability and elasticity. Its services are published via friendly RESTful APIs. Using the open API, you can access functionality throughout the platform—from application-level services all the way down to core foundational services.

A cloud contact center solution typically consists of three distinct service layers consisting of: application, platform and infrastructure. Let's take a closer look at each layer.

Application services

These are high-level services that enable specialized contact center applications and provide a consistent user experience. Application layer services include:

- **Omnichannel Routing.** Omnichannel routing provides contact routing and interaction management seamlessly across any customer engagement channel like voice, email, chat, etc.
- **Automatic Contact Distributor (ACD).** ACD is a skills-based omnichannel routing engine that ensures that customer requests are routed to qualified agents or resolved with self-service assists.
- **Interactive Voice Response (IVR).** IVR empowers customers to choose the type of help they want including interacting with an agent or self-servicing.
- **Analytics and Reporting.** These provide metrics and actionable insights into customer interactions and agent performance.
- **UI and Presentation Services.** Development frameworks for building or modifying user applications.
- **Contact Center Applications.** User applications for interacting with customer contacts and system functionality.

Using application layer services, developers get a complete, unified solution for building a consistent user experience, and APIs which can extend or customize any contact center application or CX-enabled business application used outside the contact center.

Platform services

These services provide core functionality that application layer services require. They include:

- **Communication Management.** These services include POTS and VoIP telephony, email, messaging services, and session management.
- **Work Management.** These services are used to create, modify, delete and manage tasks and flow of work.
- **Security Management.** These services are used to keep data confidential, secure and compliant with regulatory requirements.
- **Administration Management.** These services are used to create, modify, delete, and manage users, permissions, and work and log activity.
- **Data Management.** These services are used to create, delete, store, retrieve and process data.

Platform services provide tremendous opportunities for ISV's and IT developers to simplify development and operations. By using a core of common services, duplicate services can be eliminated. Applications that share common platform services simply integrate and work better together. Organizations also save time managing versions and upgrades and reduce cost by eliminating unnecessary subscriptions and vendor relationships.

Infrastructure

These services provide datacenter functionality and includes servers, network connectivity, provisioning, change control, disaster recovery, monitoring and security. When IT uses cloud resources they get SLA guarantees for uptime in addition to elasticity, scalability, and security compliance—all without upfront capital investments while also being able to re-task highly skilled IT workers to other potentially high-value transformational projects.

NICHE CLOUD PLATFORMS

Some cloud platforms claim they are a “best of breed” solution because they specialize in a narrow set of services, like VoIP or data storage. These claims must be evaluated both technically and in the larger context of:

- **Simplicity.** How many vendor relationships do you want to manage? How many service releases do you want to roll out?
- **Cost.** Why pay for twice for services? If you already have a CCaaS service, why pay extra?
- **Integration.** Do webservices all work well together?
- **Support.** When something does not work right in a multiple vendor integration, how much time are you willing to spend identifying the root cause and waiting for a resolution?
- **Trust.** Do smaller vendors have the same skill, discipline and governance controls for releasing reliable and compliant code and datacenter hosting?

CX ACCELERATORS ENTERPRISE APPLICATION DEVELOPMENT

When using a cloud contact center platform, the service APIs, can be used (often without additional expense) by development teams to innovate more quickly by building better, faster ways to engage customers inside and outside the contact center. Here are a few examples:

- Extend contact center applications with access to new tool and application integrations
- Integrate warehouse alerts to notify contact center agents when a specific item has arrived, so a customer can be personally notified.
- Implement agent chat capabilities into a customer portal so customers can easily ask contact center agents questions about an order.
- Enhance customer account apps by providing recent interactions, orders and re-order options.

Other benefits of using cloud contact center API's include:

- Development teams have the freedom to innovate the business using a fully unified CX stack and API suite.
- IT can eliminate the need to patch together a 'best of breed' solution using disparate platform integrations from multiple vendors as well eliminate constant maintenance, piece-part integration, and version compatibility issues.
- Teams stay busy building new functionality rather than constantly fixing issues.
- Organizations can swap or customize CX applications that you may want to custom-tailor for your organization's needs.

HOW TO CHOOSE THE RIGHT CX TRANSFORMATION PLATFORM

It's important to select a cloud contact center platform that will enable you to build the best possible customer service environment with well-supported and documented access to a comprehensive and continually expanding scope of integration interfaces. In this section, we'll discuss guidelines for selecting the right platform.

One Seamless Experience

Look for a solution which allows you to use and integrate best of breed customer interaction applications consistently not only between ISV and internally developed applications, but also between contact center applications and CX enabled business applications.

Simplified IT Operations

Insist on simplicity. Look for a single solution which allows you to not only save time and cost in deployment and managing change, but also lets you focus your efforts on development and innovation at your desired pace.

Development friendly APIs

Look for a platform that offers a web-service API (like RESTful) to essential services, which is also compatible with a variety of development languages.

Select a CCaaS platform that gives you access to the same APIs the vendor uses for their own product development. This will ensure the APIs are well-tested and reliable and that every update will be 100% backwards compatible.

8 Key Criteria for Selecting a CCaaS Platform

1. Utilizes web-service APIs (like RESTful).
2. Ensures compatibility with different programming languages.
3. Offers multiple services in one platform.
4. Tests APIs thoroughly. Ideally the APIs are the same ones the vendor uses to develop their CCaaS platform.
5. Offers in-depth developer support such as code samples, thorough documentation, videos, and FAQs.
6. Supports an active developer community, such as an online developer portal, where you can ask questions, get help, and browse archives.
7. Supports an active partner community that builds market-leading apps you can purchase and supports integration partners.
8. Demonstrates large market share as evidenced by positive customer, partner, and industry analyst reviews.

Developer Support

The ideal platform should also offer easy access to developer resources such as tutorials, code samples, FAQs, thorough documentation, and the ability to exercise every published API against your own contact center data. These resources should also include canned and reference applications with working examples so it's easy for your developers to quickly understand how to utilize the APIs correctly. It's also a plus if the vendor offers an active community via an online forum where your developers can get their questions answered and network with peers.

Support for Partner Applications

Lastly, select a platform that already has a strong ecosystem of market-leading partner applications that were also built using the same API services. Not only does this give you access to additional CX solutions, but there's the added benefit that these applications will integrate directly with your environment. This is additional proof that the vendor's APIs are reliable, and it also saves your team countless hours of writing their own code to develop similar applications.

CASE STUDY

LANGUAGELINE USES NICE CXONE RESTFUL APIS TO SUPPORT UNIQUE BUSINESS NEEDS

LanguageLine Solutions®, a language interpretation and translation service, customized the NICE CXone CXone platform to support their unique business requirements. Jeff Cordell, Vice President of Technology and Chief Information Officer, explains, “We’ve extended the CXone platform’s functionality using APIs and custom scripts using Studio. That includes everything from our traditional Interpreter desktop that has been tailored for interpretation purposes to providing business intelligence and analytics so we can make real time operations decisions.”

LanguageLine Custom Agent Desktop: Our business rules posed some unique challenges that didn’t allow us to use NICE CXone native agent application for our interpreters. With the CXone API platform we were able to build our own custom agent application from scratch. This allowed LanguageLine to continue to leverage the functionality of the CXone platform, yet provide our interpreters with a custom and intuitive experience tailored to our business.

CXone API used: If you want to develop a custom agent application, the Agent APIs are a valuable resource to use. You can use REST APIs like GET /agent-session/ and GET /agent-sessions/{sessionId}/get-next-event to start sessions and get events that allow your user interface to respond to real-time events based on the agent or call’s state.

“We’ve also integrated extensions from other service providers, such as video and text messaging, to CXone. If call volumes exceed our anticipated peaks, the CXone platform is scalable so we can quickly and easily add more agents. **The APIs from NICE CXone help us extend our services as quickly as possible to add more features and products that our customers care about.**”

*Jeff Cordell
Vice President of Technology and
Chief Information Officer
LanguageLine*

LanguageLine Phone-Only Agent Interface: LanguageLine has a portion of our interpreters who work from home. Some of them may just have a phone line and not have access to a computer. LanguageLine was able to build a custom voice only agent application that allowed interpreters to manage their state just with a regular phone line. NICE CXone’s scripts were powerful enough to build a custom phone application that served these interpreters needs.

LanguageLine InSight® Video Interpreting: LanguageLine was able to build a video routing application on top of CXone ACD platform allowing video and audio calls to be routed to interpreters. We used the CXone ACD’s work item feature to route video calls to the next available interpreter. This allowed LanguageLine to staff multimodal interpreters that could take both video and audio calls without changing applications.

CXone API used: We used the POST /interactions/work-items in the Patron API to initiate a work item call and queue the call to a skill. You can then use the Agent APIs to subscribe and receive work item related events and have your application respond accordingly.

Business intelligence and analytics: Managing a large number of interpreters requires real-time analytics and business intelligence. LanguageLine makes use of Admin and Reporting APIs to integrate with their Elastic/Kibana analytics solutions. This allows us to view real-time staffing and customer trends and make necessary changes in real time.

NICE INCONTACT CXONE

API EXAMPLE

To see the benefits of using NICE CXone API's, consider the following example which shows how to create a work item for a customer service agent. CXone API's are supported for use with JavaScript, C#, Ruby, PHP, Java and Scala. This example demonstrates how the API is used in JavaScript.

```
function createWorkItem() {
  var createWorkItemPayload = {
    'pointOfContact': 'string',
    'workItemId': 'string',
    'workItemPayload': 'string',
    'workItemType': 'string',
    'from': 'string'
  }
  $.ajax({
    //The baseURI variable is created by the result.base_server_base_uri
    //which is returned when getting a token and should be used to create the URL base
    'url': baseURI + 'services/{version}/interactions/work-items',
    'type': 'POST',
    'headers': {
      //Use access_token previously retrieved from inContact token service
      'Authorization': 'bearer ' + accessToken,
      'content-Type': 'application/json'
    },
    'data': JSON.stringify(createWorkItemPayload),
    'success': function (result) {
      //Process success actions
      return result;
    },
    'error': function (XMLHttpRequest, textStatus, errorThrown) {
      //Process error actions
      return false;
    }
  });
}
```

CONCLUSION

Customers now expect more from your brand. As an IT leader you have many options to lead and accelerate the digital and CX transformation that inevitably must occur within your company. Leveraging an open platform like NICE CXone may be one of the best options to consider. Not only can CXone anchor your transformation in the contact center, it's service API's can also be leveraged to help you innovate faster by creating applications and processes outside the contact center to give more of your organization the tools they need to deliver your brand promise with more personalization, greater flexibility and flawless execution.

ADDITIONAL INFORMATION

- [CXone Open Cloud Foundation](#)
- [DEVone Ecosystem](#)
- [RESTful API Developer Support](#)

TRANSFORMING ONE-ON-ONE EXPERIENCES IN THE CONTACT CENTER

NICE CXone, the world's #1 cloud customer experience platform, helps organizations be first in their industry by powering exceptional experiences for customers and employees. CXone is the first and only platform unifying best-in-class Omnichannel Routing, Analytics, Workforce Optimization, Automation and Artificial Intelligence—all built on an Open Cloud Foundation. CXone helps organizations of all sizes be first and stay first, empowering your teams to move faster and work smarter. Be the first choice of customers, first to innovate, first choice employer. Only CXone delivers one unified experience, on one cloud native platform, along one proven path, from one leader.

