

# INSTANCE ANALYZER FOR SERVICENOW

Free code quality audit and remediation application  
for ServiceNow best practices

**T**he ServiceNow platform is a large, complex suite of capabilities spanning service delivery across many domains – inside and outside of IT and was designed to make it easy to develop very advanced functionality quickly. As such it can grow quickly with a variety of parties developing functionality.

*This can inadvertently yield poor code quality in an enterprise critical system.*

## **RISK FACTORS INCLUDE:**

- Varying degrees of understanding and application of Agile best practices
- Speed of development
- Many parties – internal resources, consultants, even offshore developers writing code
- Limited design & development governance, applied consistently
- Poor knowledge of ServiceNow development best practices

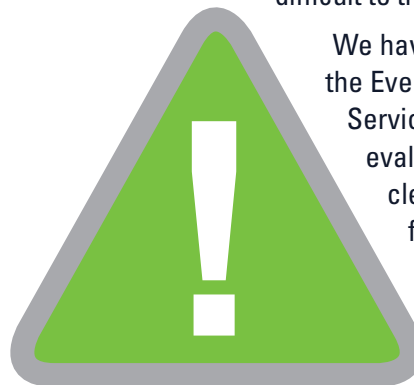
- Varying approaches and quality of QA and test processes
- Inconsistent and poor system documentation
- Difficult ServiceNow release upgrades
- Inconsistent and poor integrations with ServiceNow

Poor code quality extended over time can create a system that performs slowly, fails under stress, is difficult and complex to upgrade, is not well understood and is difficult to troubleshoot and remediate.

We have developed an automated tool - the Evergreen Instance Analyzer (EIA) for ServiceNow, to help you. It can analyze and evaluate your ServiceNow instance and clearly identify poor code and deviations from ServiceNow best practices.

This makes it much easier to remediate –

*and bring your ServiceNow code to a consistent, best practices level across your entire instance.*



# EVERGREEN INSTANCE ANALYZER FUNCTIONALITY

The EIA supports the same kind of analysis performed by the ServiceNow Automated Configuration Evaluator (ACE), and much more.

## EIA CAN:

- Analyze scripts, business rules and other instance configurations against ServiceNow published, technical best practices
- Analyze catalog items and their support within the Service Portal, and assess catalog items against a quality standard for usability (i.e. form size, readability, etc.)
- Analyze code in a ServiceNow CMS environment and identify all changes required to move to Service Portal

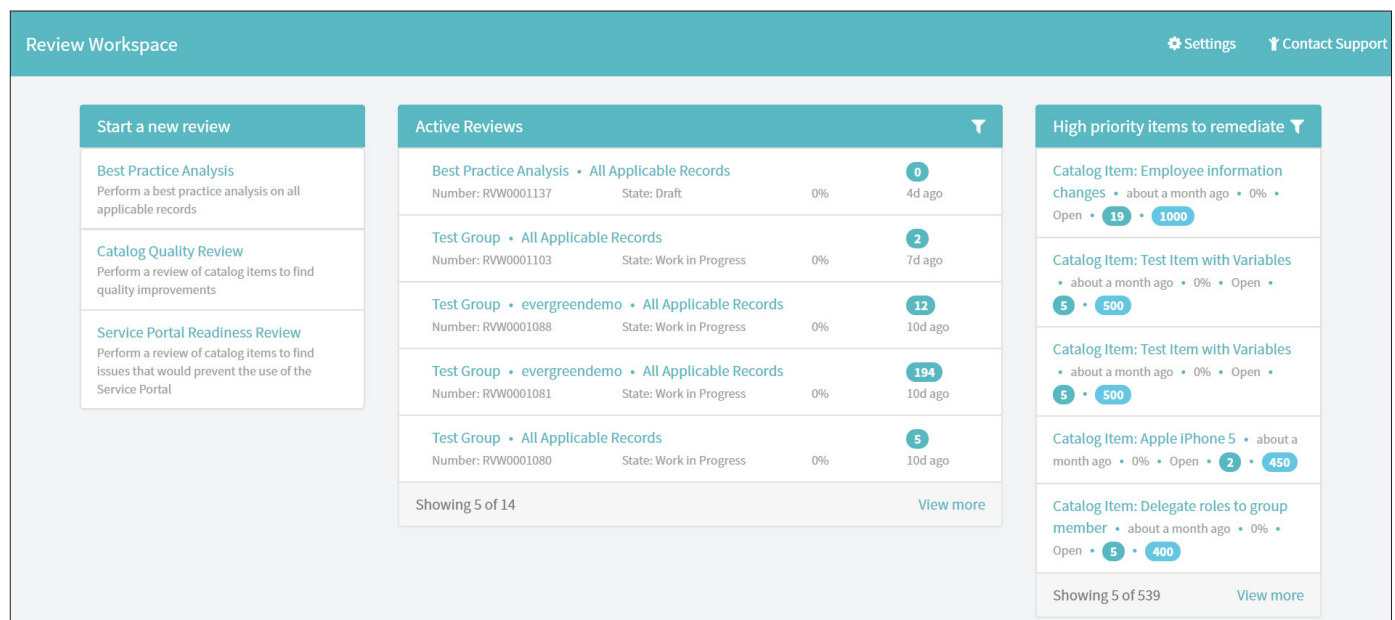
The EIA scans your instance for a set of predefined configuration scenarios that may result in issues related to performance, manageability, upgradability, scalability,

and security. The Analyzer is built as a ServiceNow scoped application to be deployed in your sub-production environment. It can be installed simply and quickly – with installation and scanning usually done within an hour or two.

**YOU CAN TAILOR EACH REVIEW YOU LAUNCH TO A SPECIFIC SET OF CODE OR DATA, SO EIA CAN BE USED IN YOUR DAILY OR WEEKLY ACTIVITIES AS A REGULAR CODE QUALITY AUDIT TOOL**

EIA brings a management console from which you can oversee all analyses underway - launch new reviews, stay current with already active reviews and keep attention on identified high priority items. From the console you can easily drill down into specific findings to see how they are progressing towards resolution. You can tailor each review you launch to a specific set of code or data, so EIA can be used in your daily or weekly activities as a regular code quality audit tool.

Once installed, an Analysis Report can be triggered in the instance and the EIA will conduct a detailed analysis of configurations and customizations against ServiceNow best practice recommendations and any



The screenshot shows the 'Review Workspace' interface. It has a teal header with 'Review Workspace' on the left and 'Settings' and 'Contact Support' on the right. The main content area is divided into three columns:

- Start a new review:** Contains three cards: 'Best Practice Analysis' (Perform a best practice analysis on all applicable records), 'Catalog Quality Review' (Perform a review of catalog items to find quality improvements), and 'Service Portal Readiness Review' (Perform a review of catalog items to find issues that would prevent the use of the Service Portal).
- Active Reviews:** A table showing 5 active reviews (out of 14). Each row includes the review name, filter, number, state, progress, and age.
 

Review Name	Filter	Number	State	Progress	Age
Best Practice Analysis	All Applicable Records	RVW0001137	Draft	0%	4d ago
Test Group	All Applicable Records	RVW0001103	Work in Progress	0%	7d ago
Test Group	evergreendemo - All Applicable Records	RVW0001088	Work in Progress	0%	10d ago
Test Group	evergreendemo - All Applicable Records	RVW0001081	Work in Progress	0%	10d ago
Test Group	All Applicable Records	RVW0001080	Work in Progress	0%	10d ago
- High priority items to remediate:** A list of 5 items (out of 539). Each item includes the catalog item name, filter, and counts for open items and total items.
 

Catalog Item	Filter	Open	Total
Employee information changes	about a month ago • 0%	19	1000
Test Item with Variables	about a month ago • 0% • Open	5	500
Test Item with Variables	about a month ago • 0% • Open	5	500
Apple iPhone 5	about a month ago • 0% • Open	2	450
Delegate roles to group member	about a month ago • 0%	5	400

known compatibility issues within the environment. The analysis types are dynamic and new analysis types can easily be added as needed.

Any issues identified are documented and compared to best practices in an Instance Analysis Report that links to the record in question and its “parent” record, if applicable. This report can then be used to track the remediation progress — each record includes a Status field and a Notes field to document the remediation’s progress and the steps, if any, taken to remediate the discovered issue. An example of the EIA management console for a single specific analysis, that of converting ServiceNow CMS to Service Portal is shown below.

## THE ANALYSIS TYPES ARE DYNAMIC AND NEW ANALYSIS TYPES FOR THE TOOL TO EXECUTE CAN EASILY BE ADDED AS NEEDED.

It enables you to see all findings, drill into specific ones, pay attention to high priority items and even see identified remediation items/findings by the last developer to update the code.

Our ServiceNow Architects can install and run the EIA application to analyze your current state, identify the changes needed and provide detailed findings and recommendations

including an estimated level of effort to bring code to best practices, should you so wish. *Our findings and the EIA application are yours to keep and use, at no cost or obligation. We do this as a way to introduce you to Evergreen and our approach to ensuring high quality.*

Service Catalog Quality, Service Portal Conversion Analysis • evergreendemo • All Applicable Records (RVW0001036)

83 10 10

Active Items to Remediate

▲ REM0001140	Remote Record: Test Table Macro Variable Item (evergreendemo)	0%	Open	300
▲ REM0001134	Remote Record: jb_sp_table_billing (evergreendemo)	0%	Open	255
▼ REM0001146	Remote Record: Expert Appointment (evergreendemo)	0%	Open	190

There are 2 findings below to remediate or ignore as part of this task

Rule	Type	Remediation State	
Desktop-only Catalog Client Scripts	Recommendation <i>i</i>	⊘ Pending	Actions ▾
Use of Unsupported Objects in Catalog Client Scripts	Error <i>i</i>	⊘ Pending	Actions ▾

▲ REM0001139	Remote Record: Tablet Request (evergreendemo)	0%	Open	160
▲ REM0001124	Remote Record: Relocation Request (evergreendemo)	0%	Open	150
▲ REM0001138	Remote Record: Item Designer Category Request (evergreendemo)	0%	Open	150

High priority items to remediate

Remote Record: Test Table Macro Variable Item (evergreendemo) • 3d ago • 0% • Open • 3 • 300

Remote Record: jb\_sp\_table\_billing (evergreendemo) • 3d ago • 0% • Open • 2 • 255

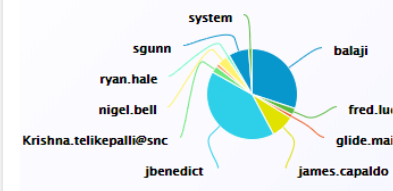
Remote Record: Expert Appointment (evergreendemo) • 3d ago • 0% • Open • 2 • 190

Remote Record: Tablet Request (evergreendemo) • 3d ago • 0% • Open • 1 • 160

Remote Record: Relocation Request (evergreendemo) • 3d ago • 0% • Open • 2 • 150

Showing 5 of 61 [View more](#)

Findings by Last Updated



balaji fred.luddy glide.maint

## LOW RISK, HIGH BENEFIT

The Evergreen Instance Analyzer is a ServiceNow scoped application and installs in a sub production instance of your ServiceNow environment, in coordination with/under the supervision of your ServiceNow technical team. Evergreen is a Gold ServiceNow Services partner (the highest level) and a ServiceNow Certified Application Developer on the platform - where we build scoped applications for the ServiceNow Store. *Our scoped applications are developed and tested to the same standards ServiceNow applies to its own code.* The EIA was developed by our senior, certified ServiceNow developers and thoroughly tested to ensure it performs as designed. This ensures that the EIA application is high quality and safe.

### BENEFITS:

- Make your regular ServiceNow upgrades much easier and safer
- Get your entire code base to a consistent, high quality standard
- Get your code base to the latest version of ServiceNow best practices
- Improve your system performance and reliability
- Consistent coding practices make it easier to document your system



- Improve the performance and scalability of your system integrations
- Make quality auditing a regular, recurring activity for your ServiceNow platform

Take advantage of the **free** Evergreen Instance Analyzer to evaluate your ServiceNow instance. Unlike the ServiceNow ACE Report, the Evergreen Instance Analyzer is designed to help you manage your code remediation, run targeted quality checks and can be used on a regular daily/weekly basis to make quality audit a part of your regular process.

The complete Evergreen Instance Analyzer scoped application along with two use cases – ServiceNow Code Best Practices and Service Catalog CMS to Service Portal Migration Analysis, is free.

## CURRENT DETAILED USE CASES

Current EIA Use Cases are described below. Additional use cases have been identified and are currently under development at Evergreen today.

### USE CASE - OVERALL SERVICENOW CODE BEST PRACTICES

ServiceNow publishes a set of technical best practices to be used when configuring or customizing your ServiceNow instance. Many of these recommendations have been put in place to ensure your instance is running as smoothly and efficiently as possible. Others are in place to ensure that users of the system have the best possible user experience with minimal hang and load times. Still others are put in place to ensure consistent behavior when creating and updating records in the system.

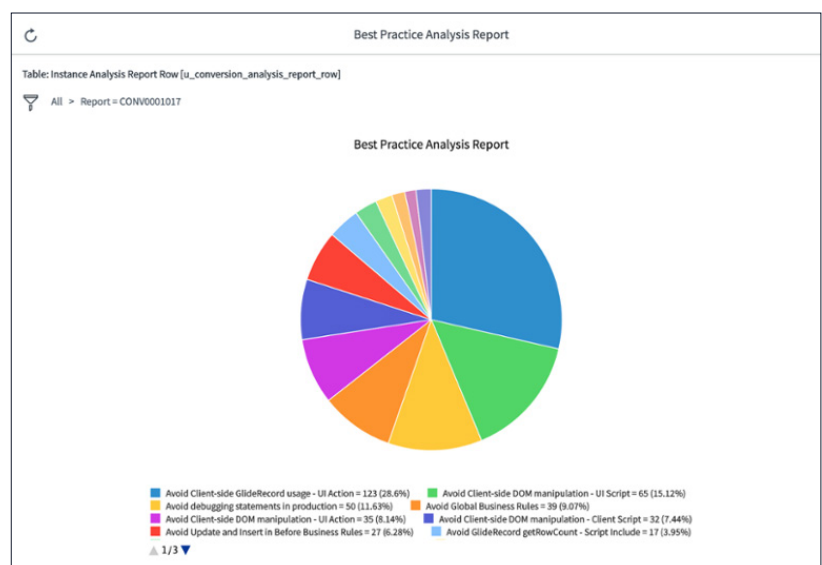
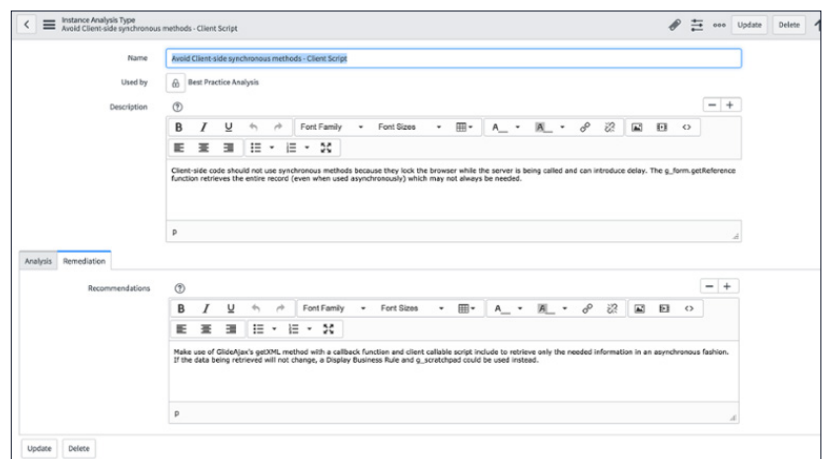
We built the Evergreen Instance Analyzer to help organizations verify that these recommendations are being followed and to help track and remediate any configurations where they aren't. A standard set of Best Practice Analysis Types has been configured based on the published ServiceNow technical best practices. This library of Analysis Types is continually updated as new best practices are published. The Evergreen Instance Analyzer can also allow an organization to create and add their own Analysis Types to run against their ServiceNow instance, to reflect their specific circumstances.

Once the EIA has been deployed and the Best Practices analysis types are fully imported and configured, a detailed report of findings can be generated. The tool will scan the configurations and customizations in the environment and document any violations of best practices in the report. Each violation will be linked to from the report and its remediation status can be tracked in the report as well.

The following ServiceNow best practices analysis types are currently supported by the tool:

- Avoid global business rules
- Avoid client-side DOM manipulation
- Avoid client-side GlideRecord usage
- Avoid client-side synchronous methods
- Avoid debugging statements in Production
- Avoid GlideRecord getRowCount usage
- Avoid insert() and update() usage in before Business Rules

Reports can easily be generated identifying the types and quantity of findings



## USE CASE - SERVICE PORTAL CONVERSION ANALYSIS

ServiceNow released a new “Service Portal” framework with its Helsinki release. This new Service Portal framework offers a much more robust and easy to configure platform compared to the existing Service Catalog functionality and the legacy “CMS” framework. Furthermore, this new framework is built on the commonly used angular.js framework which offers access to a robust set of standard web 2.0 practices and functionality rather than the limited and difficult Jelly scripting that is required by CMS. Essentially, ServiceNow has underpinned their Service Portal/Catalog with powerful and modern technology.

While CMS is still supported by ServiceNow, as old technology, it is not clear how long that will be the case. Evergreen has helped many customers to migrate from CMS to Service Portal. Because of the technology change, we identified a series of incompatibility issues--functionality that works in CMS but not in Service Portal, in addition to the list of general incompatibility issues already identified by ServiceNow. These issues need to be identified and remediated in code before a successful migration to Service Portal can be made.

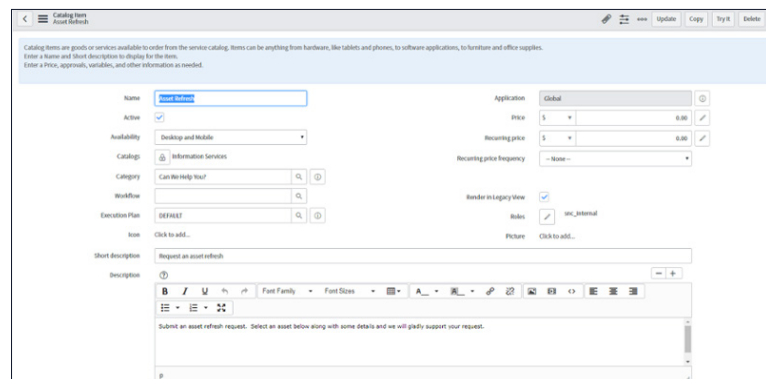
Evergreen’s Instance Analyzer for ServiceNow was built specifically to identify all coding changes needed to assist with migrating customers from an out of the box service catalog or a legacy CMS-based portal to the modern Service Portal-based solution. The EIA incorporates all of our past experience from many migration efforts and continues to evolve and improve as we learn from ongoing portal migration projects. The EIA has been successfully used in many conversion projects and is a great help in clearly identifying potential conversion issues quickly, making remediation faster and safer.

The EIA is a ServiceNow scoped application which deploys in a customer’s sub-production environment. Once installed, an Analysis Report can be triggered in the instance and the tool will conduct a detailed analysis of known conversion issues within the environment. The issue types are dynamic and new issue types for the tool to

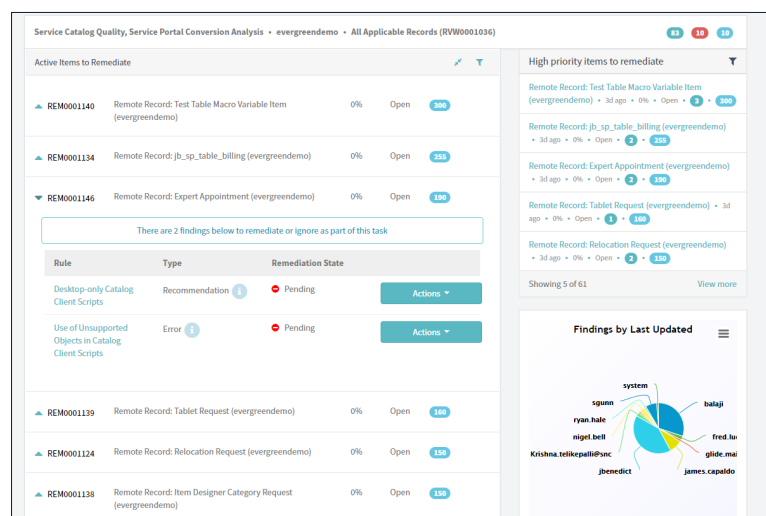
analyze can be added as needed. The following issue types are currently supported for this use case:

- GlideAjax getXMLWait Usage in Catalog Client Scripts
- GlideRecord Usage in Catalog Client Scripts
- Desktop-only Catalog Client Scripts
- Use of Unsupported Objects (document, window, jQuery, etc.) in Catalog Client Scripts
- Use of UI Macro or UI Page Variables
- Use of getControl in Catalog Client Scripts
- Use of getReference in Catalog Client Scripts

Any issues that are identified are documented in a Conversion Analysis Report that links to the record in question and its “parent” record, if applicable. This report along with the EIA management console (below) can then be used to track the remediation progress—each record includes a Status field and a Notes field to document the remediation’s progress and the steps, if any, taken to remediate the issue.



The screenshot shows the 'Catalog Item' form in ServiceNow. The form includes fields for Name, Active status, Availability, Catalog, Category, Headline, Execution Plan, and a Short description. There are also sections for Application, Price, Recurring price, and Recurring price frequency. A 'Render in Legacy view' checkbox is checked. The form is titled 'Request an asset refresh'.



The screenshot shows the 'Service Catalog Quality, Service Portal Conversion Analysis' report. The report displays a table of 'Active Items to Remediate' with columns for Item ID, Item Name, Remediation State, and a link to the item. The table lists several items, including 'Remote Record: Test Table Macro Variable Item', 'Remote Record: jb\_sp\_table\_billing', and 'Remote Record: Expert Appointment'. A summary bar indicates 'There are 2 findings below to remediate or ignore as part of this task'. The report also includes a 'High priority items to remediate' section and a 'Findings by Last Updated' chart.

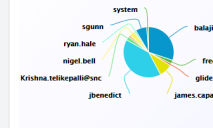
Item ID	Item Name	Remediation State	Link
REM0001140	Remote Record: Test Table Macro Variable Item (evergreendemo)	0% Open	<a href="#">View</a>
REM0001134	Remote Record: jb_sp_table_billing (evergreendemo)	0% Open	<a href="#">View</a>
REM0001146	Remote Record: Expert Appointment (evergreendemo)	0% Open	<a href="#">View</a>
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Use of Unsupported Objects in Catalog Client Scripts	Error	Pending	<a href="#">Actions</a>
REM0001139	Remote Record: Tablet Request (evergreendemo)	0% Open	<a href="#">View</a>
REM0001124	Remote Record: Relocation Request (evergreendemo)	0% Open	<a href="#">View</a>
REM0001138	Remote Record: Item Designer Category Request (evergreendemo)	0% Open	<a href="#">View</a>

High priority items to remediate

- Remote Record: Test Table Macro Variable Item (evergreendemo) • 3d ago • 0% • Open • [View](#) • [Details](#)
- Remote Record: jb\_sp\_table\_billing (evergreendemo) • 3d ago • 0% • Open • [View](#) • [Details](#)
- Remote Record: Expert Appointment (evergreendemo) • 3d ago • 0% • Open • [View](#) • [Details](#)
- Remote Record: Tablet Request (evergreendemo) • 3d ago • 0% • Open • [View](#) • [Details](#)
- Remote Record: Relocation Request (evergreendemo) • 3d ago • 0% • Open • [View](#) • [Details](#)

Showing 5 of 61 [View more](#)

Findings by Last Updated



The pie chart shows the distribution of findings by last updated. The legend includes: balaji, fred luffy, glide maint, james capaldo, fred lu, glide mai, james capaldo, fred lu, glide mai, james capaldo, fred lu, glide mai, james capaldo.