



PUBLIC INFORMATION

# INTERNAL AUDIT DEPARTMENT



**Information Technology Audit:  
County Counsel  
Selected Application Cybersecurity Controls**

**For the Year Ended February 28, 2021**

**Audit No. 2044  
Report Date: December 7, 2021**

## Number of Recommendations

**0**

**Critical Control  
Weaknesses**

**3**

**Significant Control  
Weaknesses**

**2**

**Control Findings**

## OC Board of Supervisors

CHAIRMAN ANDREW DO  
1st DISTRICT

VICE CHAIRMAN DOUG CHAFFEE  
4th DISTRICT

SUPERVISOR KATRINA FOLEY  
2nd DISTRICT

SUPERVISOR DONALD P. WAGNER  
3rd DISTRICT

SUPERVISOR LISA A. BARTLETT  
5th DISTRICT



# INTERNAL AUDIT DEPARTMENT

Information Technology Audit:  
County Counsel Selected Application Cybersecurity Controls

December 7, 2021

## AUDIT HIGHLIGHTS

SCOPE OF WORK	Perform an information technology audit of County Counsel selected cybersecurity controls for the year ended February 28, 2021.						
RESULTS	<ul style="list-style-type: none"> <li>• Access controls over critical systems should be improved to ensure access is limited to authorized individuals.</li> <li>• Controls over identification and authentication should be improved to restrict unauthorized access to critical systems.</li> </ul>						
RISKS	<p>As a result of our findings, potential risks include:</p> <ul style="list-style-type: none"> <li>• Unauthorized or inappropriate access to sensitive and critical systems and data.</li> <li>• Reduced accountability for system activity.</li> <li>• Potential misconfiguration of user access rights to department critical systems.</li> </ul>						
<p>NUMBER OF RECOMMENDATIONS</p> <table border="1"> <tr> <td>0</td> <td>CRITICAL CONTROL WEAKNESSES</td> </tr> <tr> <td>3</td> <td>SIGNIFICANT CONTROL WEAKNESSES</td> </tr> <tr> <td>2</td> <td>CONTROL FINDINGS</td> </tr> </table>	0	CRITICAL CONTROL WEAKNESSES	3	SIGNIFICANT CONTROL WEAKNESSES	2	CONTROL FINDINGS	<p>Opportunities for enhancing internal control include:</p> <ul style="list-style-type: none"> <li>• Updating password configuration settings to conform to County policy and collaborate with an application vendor for contemporary security upgrades.</li> <li>• Understanding system administration access to the network domain and file server.</li> <li>• Minimizing use of generic accounts.</li> <li>• Revising new user access forms and re-evaluating the new user access control process.</li> <li>• Performing periodic certification reviews of all user accounts that can access sensitive information.</li> </ul>
0	CRITICAL CONTROL WEAKNESSES						
3	SIGNIFICANT CONTROL WEAKNESSES						
2	CONTROL FINDINGS						

Report suspected fraud, or misuse of County resources by vendors, contractors, or County employees to 714.834.3608




INTERNAL AUDIT DEPARTMENT

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Audit No. 2044

December 7, 2021

To: Leon J. Page  
County Counsel

From: Aggie Alonso, CPA, CIA, CRMA  
Internal Audit Department Director  Digitally signed by  
Agripino Alonso  
Date: 2021.12.07 12:25:24  
-08'00'

Subject: Information Technology Audit: County Counsel Selected Application Cybersecurity Controls

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We have completed an information technology audit of selected cybersecurity controls at County Counsel for the year ended February 28, 2021. Due to the sensitive nature of specific findings (restricted information), only the results for Finding Nos. 4 and 5 immediately follow this letter. Results for the remaining findings are included in Appendix A (which is redacted from public release) and additional information including background and our objectives, scope, and methodology are included in Appendix B.

County Counsel concurred with all our recommendations and the Internal Audit Department considers management's response appropriate to the recommendations in this report.

We will include the results of this audit in a future status report submitted quarterly to the Audit Oversight Committee and the Board of Supervisors. In addition, we will request your department complete a Customer Survey of Audit Services, which you will receive shortly after the distribution of our final report.

We appreciate the courtesy extended to us by County Counsel personnel during our audit. If you have any questions, please contact me at 714.834.5442 or Assistant Director Scott Suzuki at 714.834.5509.

Attachments

Other recipients of this report:  
Members, Board of Supervisors  
Members, Audit Oversight Committee  
County Counsel Distribution  
Foreperson, Grand Jury  
Robin Stieler, Clerk of the Board of Supervisors  
Eide Bailly LLP, County External Auditor

INTERNAL AUDIT DEPARTMENT

RESULTS

**BUSINESS PROCESS & INTERNAL CONTROL STRENGTHS**

Business process and internal control strengths noted during our audit include:

- ✓ The critical application is not accessible outside the County network.
- ✓ The critical application client desktop software is only installed on authorized County workstations.
- ✓ Department IT works with the software vendor on an annual basis to perform system upgrades to ensure it meets the department's needs.

**FINDING NO. 1**

Removed due to the sensitive nature of the finding.

**FINDING NO. 2**

Removed due to the sensitive nature of the finding.

**FINDING NO. 3**

Removed due to the sensitive nature of the finding.

**FINDING NO. 4**

**User Account Documentation & Retention**

New user access documentation lacks specific application permissions and approver information, and was not consistently retained.

The new user access request form identified the system, membership levels, and security group access (Active Directory Membership) for each employee based on their position status, position category, and office location. However, the form lacks access request details such as security permission descriptions, and requirements that the authorizer print their name and the date. As a result, it was difficult to verify the signature owners.

In addition, one of two (50%) application new user accounts did not have all the necessary documentation available, specifically, the new user account e-mail instructions.

Subsequent to our review, and as a result of our audit fieldwork, County Counsel immediately revised their new user access form and now includes specific application permissions and approver information. County Counsel also completed documentation for the application new user account identified above.



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<b>CATEGORY</b>	<b>Control Finding</b>
<b>RISK</b>	Potential misconfiguration of user access rights to department critical systems.
<b>RECOMMENDATION</b>	<p>County Counsel:</p> <p>A. Revise the new user access control form to require inclusion of additional access details.</p> <p>B. Re-evaluate the new user access control process to ensure the request and approval are appropriately documented and retained prior to provisioning access rights.</p>
<b>MANAGEMENT RESPONSE</b>	Concur with recommendation. County Counsel revised the user access request form in collaboration with OCIT to ensure the request and approval are appropriately documented. County Counsel also transitioned the provisioning and deprovisioning services of user accounts to OCIT/SAIC in May 2021.

<b>FINDING No. 5</b>	<p><b>Periodic User Access Certification Review</b></p> <p>User access certification review for the one critical application we reviewed could be enhanced.</p> <p>While a user access certification review over the application is performed, it is not formalized, documented, and does not include the review of access rights at the file server level, where sensitive data from the application is exported and stored.</p> <p>Subsequent to our review, and as a result of our audit fieldwork, County Counsel significantly enhanced the user access review process to incorporate other key components.</p>
<b>CATEGORY</b>	<b>Control Finding</b>
<b>RISK</b>	Informal user access reviews increase the risk of a threat actor gaining unauthorized access to critical systems and sensitive data.
<b>RECOMMENDATION</b>	County Counsel perform a periodic and documented user access certification review across the department's critical system environment to ensure access is restricted to personnel with a direct business need.
<b>MANAGEMENT RESPONSE</b>	Concur with recommendation. County Counsel performs a periodic and documented user access certification review across the department's critical system environment to ensure access is restricted to personnel with a direct business need.



# INTERNAL AUDIT DEPARTMENT

<b>AUDIT TEAM</b>	Scott Suzuki, CPA, CIA, CISA, CFE Jimmy Nguyen, CISA, CFE, CEH Mari Elias, DPA	Assistant Director IT Audit Manager II Administrative Services Manager
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**APPENDIX A: RESTRICTED INFORMATION**

Content in Appendix A has been removed from this report due to the sensitive nature of the specific findings.



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APPENDIX B: ADDITIONAL INFORMATION

<p><b>OBJECTIVES</b></p>	<p>Our audit objectives were to determine if selected County Counsel cybersecurity security controls provide reasonable assurance:</p> <ol style="list-style-type: none"> <li>1. Access controls over critical systems are appropriate to ensure access is limited to authorized individuals.</li> <li>2. Controls over identification and authentication are appropriate to restrict unauthorized access to critical systems.</li> </ol>
<p><b>SCOPE &amp; METHODOLOGY</b></p>	<p>Our audit scope was limited to high-risk cybersecurity controls over user access management at County Counsel for the year ended February 28, 2021. Our methodology included inquiry, observation, examination of documentation, and sampling of relevant items.</p>
<p><b>EXCLUSIONS</b></p>	<p>We did not examine application controls or any processes that involve external parties such as OCIT, nor any services/activities performed or provided by the County of Orange’s third-party vendors.</p>
<p><b>PRIOR AUDIT COVERAGE</b></p>	<p>No audits of this scope have been issued for County Counsel in the last 10 years.</p>
<p><b>BACKGROUND</b></p>	<p>The Office of County Counsel serves as legal counsel for the County of Orange and represents the Board of Supervisors, County officers, and County departments.</p> <p>County Counsel has an office of approximately 70 attorneys and 30 support staff.</p> <p>County Counsel’s mission is: To provide the highest quality legal advice and representation to the Board of Supervisors, elected and appointed department heads, County agencies, their departments and staff, and Board-governed special districts.</p>





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<b>PURPOSE &amp; AUTHORITY</b>	We performed this audit in accordance with the FY 2020-21 Audit Plan and Risk Assessment approved by the Audit Oversight Committee (AOC) and the Board of Supervisors (Board).
<b>FOLLOW-UP PROCESS</b>	<p>In accordance with professional standards, the Internal Audit Department has a process to follow-up on its recommendations. A first follow-up audit will generally begin six months after release of the initial report.</p> <p>The AOC and Board expect that audit recommendations will typically be implemented within six months or sooner for significant and higher risk issues. A second follow-up audit will generally begin six months after release of the first follow-up audit report, by which time all audit recommendations are expected to be implemented. Any audit recommendations not implemented after the second follow-up audit will be brought to the attention of the AOC at its next scheduled meeting.</p> <p>A Follow-Up Audit Report Form is attached and is required to be returned to the Internal Audit Department approximately six months from the date of this report in order to facilitate the follow-up audit process.</p>
<b>MANAGEMENT'S RESPONSIBILITY FOR INTERNAL CONTROL</b>	In accordance with the Auditor-Controller's County Accounting Manual No. S-2 Internal Control Systems: "All County departments/agencies shall maintain effective internal control systems as an integral part of their management practices. This is because management has primary responsibility for establishing and maintaining the internal control system. All levels of management must be involved in assessing and strengthening internal controls." Internal control should be continuously evaluated by management and weaknesses, when detected, must be promptly corrected. The criteria for evaluating internal control is the Committee of Sponsoring Organizations of the Treadway Commission (COSO) Internal Control – Integrated Framework. Our audit complements but does not substitute for department management's continuing emphasis on control activities and monitoring of control risks.
<b>INTERNAL CONTROL LIMITATIONS</b>	Because of inherent limitations in any system of internal control, errors or irregularities may nevertheless occur and not be detected. Specific examples of limitations include, but are not limited to, resource constraints, unintentional errors, management override, circumvention by collusion, and poor judgment. Also, projection of any evaluation of the system to future periods is subject to the risk that procedures may become inadequate because of changes in conditions or the degree of compliance with the procedures may deteriorate. Accordingly, our audit would not necessarily disclose all weaknesses in the department's operating procedures, accounting practices, and compliance with County policy.



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APPENDIX C: REPORT ITEM CLASSIFICATION

Critical Control Weakness	Significant Control Weakness	Control Finding
<p>These are audit findings or a combination of audit findings that represent critical exceptions to the audit objective(s) and/or business goals. Such conditions may involve either actual or potential large dollar errors or be of such a nature as to compromise the department's or County's reputation for integrity. Management is expected to address <b>Critical Control Weaknesses</b> brought to its attention immediately.</p>	<p>These are audit findings or a combination of audit findings that represent a significant deficiency in the design or operation of internal controls. <b>Significant Control Weaknesses</b> require prompt corrective actions.</p>	<p>These are audit findings concerning the effectiveness of internal control, compliance issues, or efficiency issues that require management's corrective action to implement or enhance processes and internal control. <b>Control Findings</b> are expected to be addressed within our follow-up process of six months, but no later than twelve months.</p>



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**APPENDIX D: COUNTY COUNSEL MANAGEMENT RESPONSE**

Content in Appendix D has been removed from this report due to the sensitive nature of the management response.

