NAIC National Association of Insurance Commissioners

Date: 4/10/18

Conference Call
Open Session

EXECUTIVE (EX) COMMITTEE
Tuesday, April 17, 2018
11:00 a.m. – 12:00 p.m. (CT)

ROLL CALL

Julie Mix McPeak, Chair	Tennessee	James J. Donelon	Louisiana
Eric A. Cioppa, Vice Chair	Maine	Mike Chaney	Mississippi
Jim L. Ridling	Alabama	John D. Doak	Oklahoma
Lori K. Wing-Heier	Alaska	Elizabeth Kelleher Dwyer	Rhode Island
Katharine L. Wade	Connecticut	Raymond G. Farmer	South Carolina
Stephen C. Taylor	District of Columbia	Larry Deiter	South Dakota
Gordon I. Ito	Hawaii	Todd E. Kiser	Utah
Dean L. Cameron	Idaho	Ted Nickel	Wisconsin
Stephen W. Robertson	Indiana		

NAIC Support Staff: Andrew J. Beal/Kay Noonan

AGENDA

1. Call to Order—*Commissioner Julie Mix McPeak (TN)*

2. Roll Call—*Commissioner Gordon I. Ito (HI)*

3. Consider Adoption of Model Law Development Requests and Related Charges
   - Amendments to the *Credit for Reinsurance Model Law* (#785) and *Credit for Reinsurance Model Regulation* (#786)—*Commissioner David Altmaier (FL)* — Attachment A

4. Consider Adoption of Revised Charges and Recommendations from the Innovation and Technology (EX) Task Force—*Director Patrick M. McPharlin (MI)* — Attachment B

5. Consider Approval of Fiscal Impact Statement for Cloud Modernization —*Andrew J. Beal (NAIC)* — Attachment C

6. Discuss Any Other Matters Brought Before the Committee —*Commissioner Julie Mix McPeak (TN)*

7. Adjournment

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National Association of Insurance Commissioners

The Center for Insurance Policy and Research

MEMORANDUM

TO: Executive (EX) Committee

FROM: Commissioner David Altmaier (FL), Chair, Financial Condition (E) Committee

DATE: April 4, 2018

RE: Recommendation Regarding Covered Agreement

On March 26, the Financial Condition (E) Committee adopted a proposed approach to addressing the "Bilateral Agreement Between the United States of America and the European Union on Prudential Measures Regarding Insurance and Reinsurance" (covered agreement).

The proposed approach was based on recommendations that were made by Commissioner Julie Mix McPeak (TN), Superintendent Maria T. Vullo (NY) and me as a result of the input and discussions that took place during the Feb. 20 NAIC public hearing on the topic. The public hearing was held as a means to gather input on how the NAIC should address the covered agreement, which was signed Sept. 22, 2017, and, among other things, eliminates reinsurance collateral requirements for European Union (EU) reinsurers that meet certain requirements.

The following is a summary of the actions taken by the Financial Condition (E) Committee, which we ask for the Executive (EX) Committee to now consider:

- Adopted a Request for NAIC Model Law Development with respect to the *Credit for Reinsurance Model Law* (#785) and the *Credit for Reinsurance Model Regulation* (#786) (Attachment A). The recommendation is that these models be revised to: 1) conform to the requirements in the covered agreement with respect to EU reinsurers; and 2) provide reinsurers domiciled in NAIC-qualified jurisdictions other than within the EU (currently, Bermuda, Japan, Switzerland and, after Brexit, the United Kingdom) with similar reinsurance collateral reductions as those to be implemented to comply with the covered agreement, with provisions regarding group supervision, group capital, information-sharing and enforcement.
- Adopt charges (Attachment B) to the Reinsurance (E) Task Force, and its Qualified Jurisdiction (E) Working Group and Reinsurance Financial Analysis (E) Working Group, to make certain revisions to Model #785 and Model #786, and to develop processes to implement the changes to the models.
- Adopt charges to the Capital Adequacy (E) Task Force and the Statutory Accounting Principles (E) Working Group to address related reinsurance collateral issues raised at the public hearing.

The Committee also discussed and agreed that the NAIC should perform outreach with impacted current qualified jurisdictions early in the process in order to be certain that the results will have the intended impact.

EXECUTIVE OFFICE • 444 North Capitol Street NW, Suite 700 • Washington, DC 20001-1509 p | 202 471 3990 f | 816 460 7493
CENTRAL OFFICE • 1100 Walnut Street, Suite 1500 • Kansas City, MO 64106-2197 p | 816 842 3600 f | 816 783 8175
CAPITAL MARKETS & INVESTMENT ANALYSIS OFFICE • One New York Plaza, Suite 4210 • New York, NY 10004 p | 212 398 9000 f | 212 382 4207
www.naic.org

ATTACHMENT A: REQUEST FOR NAIC MODEL LAW DEVELOPMENT

This form is intended to gather information to support the development of a new model law or amendment to an existing model law. Prior to development of a new or amended model law, approval of the respective Parent Committee and the NAIC's Executive Committee is required. The NAIC's Executive Committee will consider whether the request fits the criteria for model law development. Please complete all questions and provide as much detail as necessary to help in this determination.

Please check whether this is: ☐ **New Model Law** **or** ☒ **Amendment to Existing Model**

1. Name of group to be responsible for drafting the model:

Reinsurance (E) Task Force

2. NAIC staff support contact information:

Daniel Schelp
dschelp@naic.org
(816) 783-8027

Jake Stultz
jstultz@naic.org
(816) 783-8481

3. Please provide a brief description of the proposed new model or the amendment(s) to the existing model. If you are proposing a new model, please also provide a proposed title. If an existing model law, please provide the title, attach a current version to this form and reference the section(s) proposed to be amended.

- ***Credit for Reinsurance Model Law* (#785)**
- ***Credit for Reinsurance Model Regulation* (#786)**

On Sept. 22, 2017, the U.S. Department of the Treasury and the Office of the U.S. Trade Representative signed the "Bilateral Agreement Between the United States of America and the European Union on Prudential Measures Regarding Insurance and Reinsurance" (Covered Agreement). The Covered Agreement includes requirements on group capital, group supervision and reinsurance collateral. The Covered Agreement would eliminate reinsurance collateral requirements for European Union (EU) reinsurers that maintain a minimum amount of own funds equivalent to $250 million and a solvency capital ratio (SCR) of 100% under Solvency II. Conversely, U.S. reinsurers that maintain capital and surplus equivalent to €226 million with a risk-based capital (RBC) of 300% of authorized control level would not be required to maintain a local presence in order to do business in the EU.

On Nov. 6, 2011, the NAIC membership adopted revisions to Section 2E of Model #785 and Section 8 of Model #786, which will be impacted by the Covered Agreement. These revisions served to reduce reinsurance collateral requirements for certified non-U.S. licensed reinsurers that are licensed and domiciled in qualified jurisdictions. Prior to these amendments, for states that adopted the models or a substantially similar law and/or regulation, in order for their domestic U.S. ceding companies to receive reinsurance credit, the reinsurance must either have been ceded to U.S. licensed reinsurers or secured by collateral representing 100% of U.S. liabilities for which the credit was recorded.

While the group capital and group supervision provisions of the Covered Agreement are not expected to require changes to the states' laws, the states will need to take action with respect to reinsurance collateral provisions within 60 months (five years) or face potential federal preemption by the Federal Insurance Office (FIO). Specifically, it is recommended that Model #785 and Model #786 be revised to conform to the requirements of the Covered Agreement, and to provide reinsurers domiciled in other NAIC qualified jurisdictions other than within the EU with similar reinsurance collateral requirements as those provided to EU reinsurers under the Covered Agreement. In addition, any revisions to Model #785 and Model #786 should incorporate other standards included in the Covered Agreement, the most noteworthy among such standards being the requirement that the qualified jurisdiction must agree to recognize the states' approach to group supervision, including group capital, as well as provisions for enforcement of these requirements.

4. Does the model law meet the Model Law Criteria? ☒ **Yes** **or** ☐ **No** **(Check one)**

(If answering no to any of these questions, please reevaluate charge and proceed accordingly to address issues).

a. Does the subject of the model law necessitate a national standard and require uniformity amongst all states? ☒ **Yes** **or** ☐ **No** **(Check one)**

If yes, please explain why:

The federal Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) provides that a state insurance law or regulation may be subject to preemption upon a determination by the FIO director, in accordance with notice and other procedural requirements set forth in the Dodd-Frank Act, that the state insurance measure is inconsistent with a covered agreement and results in less favorable treatment of non-U.S. insurers subject to the covered agreement than a U.S. insurer domiciled, licensed or otherwise admitted in the state. Under the Covered Agreement, the states have 60 months (five years) from signature of the agreement to enact reinsurance reforms removing collateral requirements for EU reinsurers that meet the prescribed conditions in the Covered Agreement.

b. Does Committee believe NAIC members should devote significant regulator and Association resources to educate, communicate and support this model law?

☒ **Yes** **or** ☐ **No** **(Check one)**

5. What is the likelihood that your Committee will be able to draft and adopt the model law within one year from the date of Executive Committee approval?

☒ **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5** **(Check one)**

High Likelihood **Low Likelihood**

Explanation, if necessary:

As previously noted, the states have 60 months (five years) from signature of the Covered Agreement (Sept. 22, 2017) to conform their reinsurance collateral requirements for applicable EU reinsurers to the terms of the Covered Agreement, or face potential federal preemption through determinations by the FIO director. Under the Covered Agreement, the process for considering potential preemption determinations of state laws that are inconsistent with the Covered Agreement begins 42 months following signature of the agreement, with any preemption determination required to be completed by the end of the 60-month period. In order to meet this rigid time frame, it will be important for the NAIC membership to complete the proposed revisions to Model #785 and Model #786 as soon as is reasonably possible, in order to provide the states with the maximum time to implement the revisions.

6. What is the likelihood that a minimum two-thirds majority of NAIC members would ultimately vote to adopt the proposed model law?

☒ **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5** **(Check one)**

High Likelihood **Low Likelihood**

Explanation, if necessary: See previous discussion.

7. What is the likelihood that state legislatures will adopt the model law in a uniform manner within three years of adoption by the NAIC?

☒ **1** ☐ **2** ☐ **3** ☐ **4** ☐ **5** **(Check one)**

High Likelihood **Low Likelihood**

Explanation, if necessary: See previous discussion.

8. Is this model law referenced in the NAIC Accreditation Standards? If so, does the standard require the model law to be adopted in a substantially similar manner?

On April 9, 2013, the NAIC adopted the significant elements of the 2011 revisions to Model #785 and Model #786 as an "optional" accreditation standard. Specifically, under this optional standard, a state is not required to adopt the certified reinsurer revisions to the models, but if it chooses to reduce its reinsurance collateral requirements, the state's laws and regulations must be substantially similar to the key elements of the revisions. Effective Jan. 1, 2019, the NAIC membership made the current *Reinsurance Ceded to Certified Reinsurers* provisions of Part A: Laws & Regulations—Traditional Insurers a required and uniform accreditation standard applicable to all NAIC-accredited jurisdictions. This new uniform standard continues to require that accredited jurisdictions adopt the provisions of the models in a substantially similar manner.

9. Is this model law in response to or impacted by federal laws or regulations? If yes, please explain.

Yes. Under Title V of the Dodd-Frank Act, the U.S. Department of the Treasury and the Office of the U.S. Trade Representative are authorized to jointly negotiate covered agreements, defined under the Dodd-Frank Act as written bilateral or multilateral agreements between the United States and one or more foreign governments, authorities or regulators regarding prudential measures with respect to insurance or reinsurance, on the condition that the prudential measures subject to a covered agreement achieve a level of protection for insurance or reinsurance consumers that is "substantially equivalent" to the level of protection achieved under U.S. state insurance laws. The Covered Agreement was negotiated pursuant to authority included within the Dodd-Frank Act and has been represented to be an agreement consistent with such authority. The Covered Agreement requires the states to eliminate reinsurance collateral requirements for EU reinsurers that maintain a minimum amount of own funds equivalent to $250 million and a solvency capital ratio (SCR) of 100% under Solvency II. The states will need to take action with respect to reinsurance collateral reforms within 60 months (five years) or face potential federal preemption determinations by the FIO director.

ATTACHMENT B: PROPOSED CHARGES

- "The Reinsurance (E) Task Force is directed to develop revisions to the *Credit for Reinsurance Model Law* (#785) and the *Credit for Reinsurance Model Regulation* (#786) to conform to the terms of the Covered Agreement. ***Complete by 2018 Fall National Meeting***."

- "The Reinsurance (E) Task Force is directed to develop revisions to the *Credit for Reinsurance Model Law* (#785) and the *Credit for Reinsurance Model Regulation* (#786) to allow reinsurers domiciled in NAIC qualified jurisdictions other than within the EU to realize reinsurance collateral requirements similar to those provided under the Covered Agreement under specified circumstances. In order for an insurer domiciled in a qualified jurisdiction outside of the EU to receive the same collateral requirement treatment as provided to EU-domiciled reinsurers, that non-EU qualified jurisdiction must agree to adhere to all other standards imposed upon the EU in the Covered Agreement, including the requirement that the qualified jurisdiction must agree to recognize the states' approach to group supervision, including group capital. As part of its deliberations, the Task Force should consult with international regulators, in addition to all other interested parties. ***Complete by 2018 Fall National Meeting***."

- "The Reinsurance (E) Task Force is directed to develop revisions to the *Credit for Reinsurance Model Law* (#785) and the *Credit for Reinsurance Model Regulation* (#786) to address the effect of a breach of the Covered Agreement (as determined pursuant to its terms) on a reinsurer's collateral obligations and the effect of a failure of a non-EU qualified jurisdiction to meet the standards imposed by its agreement or acknowledgment to adhere to the terms of the Covered Agreement and/or the model law and regulation. ***Complete by 2018 Fall National Meeting.***"

- "In conjunction with any revisions to the *Credit for Reinsurance Model Law* (#785) and the *Credit for Reinsurance Model Regulation* (#786), the Qualified Jurisdiction (E) Working Group is directed to consider changes to the *Process for Developing and Maintaining the NAIC List of Qualified Jurisdictions* to require that qualified jurisdictions recognize key NAIC solvency initiatives, including group supervision, group capital standards, and as well as require strengthening of the information-sharing requirements between the states and qualified jurisdictions, in order for reinsurers domiciled in qualified jurisdictions to receive similar treatment to EU reinsurers under the Covered Agreement, and processes of removal of qualified jurisdiction status in the event of a breach. ***Complete by the 2018 Fall National Meeting."***

- "The Reinsurance Financial Analysis (E) Working Group is directed to consider changes in its current methods of monitoring certified reinsurers domiciled in Qualified Jurisdictions to incorporate changes to state reinsurance collateral requirements caused by the EU Covered Agreement and any changes to the *Credit for Reinsurance Model Law* (#785) and *Credit for Reinsurance Model Regulation* (#786) to provide similar treatment to reinsurers domiciled in Qualified Jurisdictions. ***Complete by the 2019 Fall National Meeting."***

- "Review and possibly modify the Life and Health risk-based capital (RBC) formulas specific to reinsurance credit risk charges to be based on the financial strength of the reinsurer consistent with the Property & Casualty (P&C) RBC formula, giving due consideration to public default experience and current factors used by credit rating agencies. Consider also whether adjustments are needed to the P&C RBC formula to consider such information relative to non-rated reinsurers. ***Complete by the 2020 Fall National Meeting.***"

- "Review and possibly modify Schedule F and any corresponding annual financial statement pages to determine how best to reflect the expected changes to the *Credit for Reinsurance Model Law* (#785) and the *Credit for Reinsurance Model Regulation* (#786). Give due consideration to alternatives, including whether an allowance for doubtful accounts is appropriate. ***Complete by the 2020 Fall National Meeting."***

Innovation and Technology (EX) Task Force

2018 Cybersecurity Charges Roll-Up

The **Innovation and Technology (EX) Task Force** will:

A. Provide a forum for the discussion of innovation and technology developments in the insurance sector, including the collection and use of data by insurers and state insurance regulators—as well as new products, services and distribution platforms—in order to educate state insurance regulators on how these developments impact consumer protection, privacy, insurer and producer oversight, marketplace dynamics and the state-based insurance regulatory framework.
B. Develop regulatory guidance, white papers, model laws and/or regulations, or make other recommendations to the Executive (EX) Committee, as appropriate.
C. Discuss regulatory issues that arise with the development of autonomous vehicles; study and, if necessary, develop recommendations for changes needed to the state-based insurance regulatory framework; consider development of a white paper or model legislation, if necessary.
D. Discuss emerging issues related to companies or licensees leveraging new technologies to develop products for on-demand insurance purposes—in addition to potential implications on the state-based insurance regulatory structure—including, but not limited to, reviewing new products, cancellations, nonrenewals, coverage issues, notice provisions and policy-delivery requirements.
E. Monitor developments in the area of cybersecurity, including the implementation of the Insurance Data Security Model Law and representing the NAIC and communicating with other entities/groups, including sharing information as may be appropriate.
F. Consider what, if any, additional consumer disclosures related to cybersecurity might be necessary and effective and, if appropriate, develop model consumer disclosure guidance by December 2018.
G. Coordinate with other NAIC committees and task forces, as appropriate, on technology, innovation and cybersecurity issues.

Requests to Executive Committee

A. Direct NAIC management to conduct research into the appropriate skills and the potential number of resources required for the organization to address the needs of the NAIC membership in conducting their reviews of predictive models and make appropriate recommendations to the Executive (EX) Committee and the Internal Administration (EX1) Subcommittee.
B. Direct the NAIC Legal Division to prepare a memorandum analyzing methods and procedures to be followed in sharing predictive modeling information so as to maintain applicable statutory confidentiality protections.

COMMENTS TO NAIC EXECUTIVE COMMITTEE FOR APRIL 17, 2018 AGENDA
INNOVATION & TECHNOLOGY TASK FORCE - BIG DATA WORKING GROUP

April 16, 2018

Hon. Julie McPeak
President
National Association of Insurance Commissioners
1100 Walnut Street
Suite 1500
Kansas City, MO 64106-219

RE: INNOVATION & TECHNOLOGY TASK FORCE - BIG DATA WORKING GROUP COMMENTS TO NAIC EXECUTIVE COMMITTEE FOR APRIL 17, 2018 AGENDA

Dear Commissioner McPeak:

We write on behalf of the Property Casualty Insurance Association of America ("PCI") regarding Agenda Item Number 4 on the Executive Committee agenda for April 17, 2018 – the recommendations of the Innovation and Technology (EX) Task Force (the "Task Force"). PCI appreciates the direction taken by the Task Force to charge the Casualty Actuarial Statistical Task Force ("CASTF") with developing best practices and regulatory guidance for the use and review of predictive models for property and casualty insurance. We look forward to a public discussion and will provide comments and suggestions throughout that process.

PCI would like to comment on the instruction to the NAIC to research the skills and resources that may be necessary for the NAIC to provide training and support for the review of predictive models. PCI supports the efforts to provide training and guidance to insurance regulators and encourages the NAIC to share the results of this analysis publicly.

One issue of paramount importance to our members is whether NAIC employees or NAIC contractors will participate in the review of predictive models that are submitted to state insurance regulators as part of insurance company rate filings. PCI's members are concerned about maintaining the independence of state insurance regulators and the due process rights of insurance companies. Filing reviews should be conducted only by state insurance regulators, without the assistance of independent third-party vendors that contract directly with the NAIC.

PCI urges the NAIC to focus its analysis on how training and support may be provided to regulators without direct involvement of the NAIC in the review process. However, if the analysis includes providing direct review services to states, the analysis should consider how that may be done through a structured, arm's length vendor relationship. For any options included in the analysis, PCI would expect state regulators to maintain full control and oversight of all parts of the regulatory rate review process, including submission of objections and review of company responses. Finally, we understand and appreciate that the analysis will address legal issues around protecting the confidentiality of companies' proprietary and trade secrets.

Thank you for your careful consideration of the concerns of the PCI members. We look forward to continuing to work with the Innovation & Technology Task Force and its working groups to help foster innovation within the state regulatory structure.

Sincerely,

Deirdre Manna
Vice President, Political Engagement
and Regulatory Affairs

David Snyder
Vice President, International Policy

FISCAL IMPACT STATEMENT

DATE SUBMITTED:	MARCH 8, 2018
NAME OF INITIATIVE:	CLOUD TRANSITION PHASE II (CLOUD DEVELOPMENT TOOLS MODERNIZATION)
REGULATOR/BUSINESS SPONSOR:	INNOVATION AND TECHNOLOGY (EX) TASK FORCE
NAIC STAFF SUPPORT:	SCOTT MORRIS, CHIEF TECHNOLOGY OFFICER
REQUESTED INITIATIVE START DATE:	APRIL 16, 2018
ANTICIPATED COMPLETION DATE:	FEBRUARY 15, 2019
TOTAL REVENUE EXPECTED (2018):	$0
(2019):	$0
TOTAL EXPENSE REQUESTED (2018):	$1,747,946*
(2019):	$852,669*
TOTAL CAPITAL REQUESTED (2018):	$0
(2019):	$0

*Expenses are net of cost share with NIPR.

I. Executive Summary:

The NAIC recently released *State Ahead*, a strategic blueprint approved by NAIC members to position the organization to better support the needs of state insurance regulators in a rapidly changing insurance marketplace. One significant element of that blueprint is the move of the organization's applications to the Cloud. Cloud solutions will enable the organization to streamline data intake processes; expand the tools offered to the membership and its constituents; reduce the cost of data processing and storage; increase the level and timeliness of analysis; and allow for experimentation of new products and services without a significant financial investment.

The groundwork for the transition to the Cloud began in mid-2017 with the membership's approval of a fiscal representing the Cloud Landing Zone. The NAIC's strategy for moving to the Cloud was validated by experienced consultants, and the environment was set up to support the initial applications chosen to move to the Cloud.

This fiscal outlines the second phase of the transition to the Cloud. This initiative includes completing the setup of the technical environments and cloud operating processes; licensing the best tools to securely develop and utilize the organization's data and applications; training staff to use these tools; and preparing the organization for transformation to the Cloud. Ultimately, as applications move to the Cloud, the NAIC and NIPR will be able to more easily provide new features and functionality to benefit the membership, as well as consumers and the insurance industry.

A key component to the success of this initiative will be a culture shift at the organizational level. Thus this fiscal also includes a request for funding to support a DevOps transformation, which is the organizational capability impacting how new features move from a developer's fingertips to the customers in a highly automated, standardized, and secure way. DevOps blends organizational philosophies, processes, and tools to enable services to be delivered more quickly and efficiently.

There are numerous benefits to be gained from an investment in cloud technologies and the adoption of DevOps. These benefits include:

- *Increased system efficiencies*. Many existing manual processes will be automated, yet the amount of code used for computer programming will decrease. Both factors will improve the organization's ability to maintain its systems while increasing the functionality provided.

- *Improved system availability*. While NAIC systems generally provide a high level of availability, system performance and availability are expected to increase.

- *Enhanced customer support*. Each application will be managed separately in the Cloud, which will improve the ability to troubleshoot performance issues. In addition, several new tools will be used to identify, track, and address issues more easily or prevent issues from occurring in the first place.

- *Greater cost savings over time.* The pay-as-you-use model offered through the Cloud reduces the need for large capital and technology expenditures. As the organization's existing contracts expire, they will be replaced with less costly on-demand alternatives with predictable cost and flexibility to scale up or down as needed.

- *Increased capabilities and innovation through speed to market for new services.* The organization will have faster access to more cost-effective technology choices in areas like big data and artificial intelligence; the agility to explore new technologies; and be able to attract skilled talent pursuing work in modern platforms, tools, and templates.

This project also includes cloud technical support in the way of penetration testing for the following projects: Market Conduct Annual Statement (MCAS) Redesign; InsData Rewrite; Online Fraud Reporting System (OFRS) Redesign; and Consumer Information Source (CIS) Redesign.

II. Key Deliverables:

The key deliverables used to measure the success of this initiative include:

- Implementation of tools, automated processes, and infrastructure for upcoming cloud projects.
- Staff training, development of migration methodologies, and the completion of several test migrations.

- Transformation and training in a DevOps culture of continuous learning and improvement with increased collaboration between internal development and operations teams.
- Improved automation of internal security and governance.

III. Financial and Organizational Impact:

The financial impact of this project is summarized below within four main categories of expenses: computing, software, consulting, and training.

A. Computing
Computing cost of $284,750 is requested in 2018 to run cloud-based applications via Amazon Web Services (AWS) to cover the NAIC's non-project-specific costs and 2018 cloud projects. These run costs will continue and will be $385,250 in 2019. NIPR's run cost is $140,250 in 2018 and $189,750 in 2019.

B. Software/Tools
The NAIC expects to license several new Cloud and DevOps tools to bridge gaps in the current environment and improve organizational capabilities to transition to the Cloud. The NAIC license cost for these tools is $124,932 in 2018 and $265,253 in 2019; NIPR's cost is $61,533 in 2018 and $130,647 in 2019. Tools under consideration include:

- Log aggregation to consolidate disparate logs for improved analysis, searching, reporting and error handling;
- Platform and application monitoring to provide real-time metrics to detect and diagnose issues;
- Code repository to ensure version management and ease code reviews;
- Enhanced backups to improve recovery of applications and data;
- Incident management tracking system to accelerate response times and standardize processes and procedures;
- Messaging for team collaboration and transparency; and
- Web application firewall allowing for additional protection from malicious cyberattacks.

The NAIC's internal security team expects to license new tools as well as additional licenses for existing tools, in order to improve the security posture of the organization with this initiative. The NAIC's cost to license these tools is $83,080 in 2018 and $99,830 in 2019. NIPR's cost for these tools is $40,920 in 2018 and $49,170 in 2019. The tools include the following:

- Cloud compliance tool to secure cloud services and minimize the ability for unauthorized users to gain entry to applications;
- Additional license allocations for the current Security Information and Event Management (SIEM) software for greater real-time analysis of security alerts;
- Web application scanning to identify potential security vulnerabilities within applications;
- Additional license allocations for the current vulnerability scanner, which identifies weaknesses across computers, networks, and equipment; and
- Usage costs to research security-related tools as they become available in the Cloud.

C. Consulting
This fiscal requests consulting expertise, with a portion of the engagements to be cost-shared with NIPR. The NAIC's portion of these requests totals $1,104,674 in 2018 and $69,161 in 2019. NIPR's share of the consulting engagements is $273,900 in 2018 and $13,200 in 2019. In addition, a portion of the NAIC's staff augmentation consulting will be offset by $208,488 in

2018 and $18,077 in 2019 in credits for the NAIC staff work charged to NIPR under the NAIC/NIPR Licenses and Services Agreement. The consulting requests include:

- Staff augmentation consultants (NAIC-$488,574 in 2018 and $42,361 in 2019), to enable six NAIC technical staff to transition their operational work in order to be fully dedicated to this initiative. The skillsets required of these consultants range from solution architect to database administrator.
- Cloud and DevOps Tool specialists (NAIC-$475,700 and NIPR-$234,300 in 2018; NAIC-$26,800 and NIPR-$13,200 in 2019), with technical expertise in the new tools being implemented, pre-migration activities, and cloud shared services build out and configuration. This includes:
    - Workshops with technical subject matter experts
    - Shared services build out consulting
    - Identify management and cost optimization
- Security Program Assessment (NAIC-$80,400 and NIPR-$39,600 in 2018) to ensure compliance rules and security policies are met.
- Penetration testing (NAIC-$60,000 in 2018) to ensure the four 2018 cloud projects are not vulnerable to security threats.

D. Training

It will be necessary to train NAIC technical and security staff to use the new tools and to adopt a DevOps culture. The fiscal includes $150,510 in 2018 and $33,175 in 2019 to fund the following requests:

- Security team training
- Cloud and DevOps training for technical staff
- Training certifications

See **Attachment I** for further financial details.

Business Area Impacts

There will be significant operational impacts as a result of transitioning to the Cloud and adopting DevOps practices. New processes to manage and use cloud resources and to deploy and configure code will be established.

- *Finance/Budgeting* – the move to cloud computing will require changes in expense management, moving from capital asset expenditures and maintenance to consumption-based pricing and operating expenses. Business areas and Finance will have the ability to readily see the cost to run production workloads in the Cloud, which is not available in the current technology structure.
- *Human Resources and People Managers* – new skills and roles will be required, staff will need to be trained, and organizational changes may be required to support new processes.
- *Organizational Change Management* – there will need to be a strong change management process in place to ensure a successful cloud program and successful transition of staff to new processes.
- *IT Governance* – policies will need to be established for the use of cloud computing.
- *IT Security* – security will be redesigned or modified to meet compliance rules and protect data, applications, and infrastructure for cloud computing.
- *IT Development and Operations* – new processes will be defined to manage and deliver cloud services and infrastructure. There will be a blurring of roles between developers, testers, and operators as a DevOps culture is adopted.

IV. Stakeholder Impact if the Fiscal is Not Approved:

If this project is not approved, the cloud adoption and execution for NAIC and NIPR will be disparate, inefficient, and less secure. The benefits described in the Executive Summary will be minimized or in some cases unrealized.

The move to the Cloud represents a major shift in the way the organization provides products and services for its members. As the major stakeholder, every effort will be made to maximize benefits to the membership while minimizing negative impacts that might occur as a result of undertaking a project of this size.

Initially, NAIC and NIPR staff will be the most impacted stakeholders as there will be changes to a large number of internal business areas. Overall, the stakeholders include:

- NAIC and NIPR Business Units (legal, finance, human resources and business application owners) – internal staff who will use technology hosted on the Cloud.
- NAIC and NIPR Technical Staff (architects, developers, testers, security, network, infrastructure, project managers, application owners, operations, and process owners) – will provide technical expertise to implement technology on the Cloud.
- Regulators & Industry – users of technology implemented on the Cloud.

External and internal web users of applications that migrate to the Cloud are stakeholders, too. While they will probably experience the least change in terms of modifications to their work processes or loss of productivity during product migrations, they are expected to see many benefits from the advantages of cloud computing with greater system reliability and faster resolution of system issues should they occur.

V. Risk Management Plan if the Fiscal is Approved:

The Cloud is a new computing technology for the NAIC and NIPR and there is a high rate of change in cloud services and offerings. This risk is being minimized by the assignment of a NAIC staff member, the Chief Architect with cloud experience, and by leveraging the technical expertise of highly rated cloud vendors and partners as needed. Although this is a new technology for the NAIC, this service has been in existence since 2006 and a large number of companies are currently using similar technology.

Inherent with technology adoption are a number of other risks, as outlined below:

- The internal capacity of staff is a risk and is being mitigated by leveraging staff augmentation for key roles to enable them to work on this initiative.
- The transition to working in the Cloud and within a DevOps culture is transformational and some staff may not understand the new culture. The risk is being minimized through a comprehensive change management plan, which includes communication, training, and provisioning of managers with tools and information to assist with the transition.
- New skills will be needed for the transition to the Cloud and a DevOps culture. This risk is being minimized by a training plan that has learning paths by role that includes cloud, DevOps, and agile domains. Training will be provided to employees through a variety of mediums including online, instructor-led, self-study, and hands-on training.
- Cloud operating costs are ongoing and typically non-negotiable. Existing resources cannot be stretched beyond original planned obsolescence without a cost (e.g., servers being used beyond their depreciable life cycle from three years to four or five years).

Legal counsel and external expertise will be very important in establishing the contracts and agreements for cloud services.

- New tools are needed for automation and scalability for cloud migrations. The initial selection of tools may need to be adjusted based on learnings as the project progresses. This risk is being managed by conducting proof of concepts using trial subscriptions before buying a small number of tool subscriptions to start out with before scaling to enterprise-wide needs.
- The NAIC's internal Enterprise Project Management Office has initiated cloud program management to manage risks and dependencies across the various cloud projects, change management, training, and communication.

External business partners and vendors may also experience change as a result of this initiative if there are changes to the web services or other specifications upon which they rely when an application they use is migrated to the Cloud. For example, some external partners use a web service to retrieve or submit data from or to the NAIC. If the web service changes, the partner will need to incorporate that change. Communication and coordination will be important to provide these business partners and vendors advanced notification of any impacts to them, as well as the time needed to respond to the changes.

VI. Security Impact:

This second phase of the project builds on the secure and reliable cloud computing foundation established in the first phase (Cloud Landing Zone and Roadmap), approved by the Executive Committee membership in July 2017. Specifically, this project:

- Improves and increases the security and governance automation for the Cloud.
- Automates security and governance in the new DevOps processes for software life cycle development.
- Verifies compliance rules and security policies are met by leveraging an external experienced consultant to conduct a cloud security assessment.
- Confirms 2018 cloud projects have a high level of protection from cybersecurity threats by leveraging an external consultant to conduct penetration tests on applications before they go to production.
- Implements several security-related tools to support the internal security team as they monitor compliance and security for the Cloud.

Ultimately, the NAIC believes the move to a cloud environment will provide greater security than the current environment, but will need to manage multiple environments from a security standpoint while this transition is occurring.

2018 Budget
Fiscal Impact Statement Project Cost Analysis

Project/Initiative: Cloud Development Tools Modernization

Business Entity: NAIC

Description	April	May	June	July	August	September	October	November	December	2018 Total	2019 Budget
	2018 Budget Spread										
Revenues:											
Total Revenues	-	-	-	-	-	-	-	-	-	-	-
Expenses:											
A. Computing											
Computing Costs via AWS	47,200	47,200	47,200	47,200	47,200	47,200	47,200	47,200	47,400	425,000	575,000
NIPR Credit for Computing Costs via AWS	(15,576)	(15,576)	(15,576)	(15,576)	(15,576)	(15,576)	(15,576)	(15,576)	(15,642)	(140,250)	(189,750)
NAIC Net Cost for Computing	31,624	31,624	31,624	31,624	31,624	31,624	31,624	31,624	31,758	284,750	385,250
B. Software/Tools											
Cloud & DevOps Tool Licenses	16,277	16,277	16,277	16,277	17,945	21,999	22,152	27,652	31,609	186,465	395,900
NIPR Credit for Cloud & DevOps Tool Licenses	(5,371)	(5,371)	(5,371)	(5,371)	(5,922)	(7,260)	(7,310)	(9,125)	(10,431)	(61,533)	(130,647)
NAIC Net Cost for Cloud & DevOps Software/Tools	10,906	10,906	10,906	10,906	12,023	14,739	14,842	18,527	21,178	124,932	265,253
Security Team Tool Licenses	13,778	13,778	13,778	13,778	13,778	13,778	13,778	13,778	13,776	124,000	149,000
NIPR Credit for Security Team Tool Licenses	(4,547)	(4,547)	(4,547)	(4,547)	(4,547)	(4,547)	(4,547)	(4,547)	(4,546)	(40,920)	(49,170)
NAIC Net Cost for Security Team Software/Tools	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,231	9,230	83,080	99,830
C. Consulting											
Staff Augmentation Consulting	24,176	80,585	84,614	84,614	92,673	76,556	92,673	80,585	80,586	697,062	60,438
NIPR Credit for NAIC staff resources on Cloud project	(7,231)	(24,103)	(25,308)	(25,308)	(27,718)	(22,897)	(27,718)	(24,103)	(24,103)	(208,488)	(18,077)
NAIC Net Cost for Staff Augmentation	16,945	56,482	59,306	59,306	64,955	53,659	64,955	56,482	56,483	488,574	42,361
Cloud & DevOps Tools Consulting	-	40,000	80,000	95,000	105,000	125,000	105,000	85,000	75,000	710,000	40,000
NIPR Credit for Cloud & DevOps Tools Consulting	-	(13,200)	(26,400)	(31,350)	(34,650)	(41,250)	(34,650)	(28,050)	(24,750)	(234,300)	(13,200)
NAIC Net Cost for Staff Augmentation	-	26,800	53,600	63,650	70,350	83,750	70,350	56,950	50,250	475,700	26,800
Security Program Assessment Consulting			120,000							120,000	
NIPR Credit for Security Program Assessment Consulting			(39,600)							(39,600)	
NAIC Net Cost for Security Program Assessment	-	-	80,400	-	-	-	-	-	-	80,400	-
NAIC Cost for Penetration Testing Services	15,000			15,000		15,000		15,000		60,000	
D. Training											
Security Team Training				2,000						2,000	
Cloud Training-Security Team	990	248	248	248	248	248	248	248	248	2,970	2,970
Cloud Training-IT Staff	9,847	2,462	2,462	2,462	2,462	2,462	3,462	2,462	2,462	30,540	30,205
DevOps Training-IT Staff			40,000			50,000			10,000	100,000	
Training Certification	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,700	1,400	15,000	
NAIC Cost for Training	12,537	4,409	44,409	6,409	4,409	54,409	5,409	4,409	14,109	150,510	33,175
Total Expenses	**96,243**	**139,452**	**289,476**	**196,126**	**192,593**	**262,412**	**196,411**	**192,224**	**183,009**	**1,747,946**	**852,669**
Revenues Over (Under) Expenses	**(96,243)**	**(139,452)**	**(289,476)**	**(196,126)**	**(192,593)**	**(262,412)**	**(196,411)**	**(192,224)**	**(183,009)**	**(1,747,946)**	**(852,669)**
										Total 2018/2019	**2,600,615**

